



# *A Social-Economic Profile of the San Juan Basin*

by Vicki Hayes  
Bureau of Land Management — San Juan Area Office



Resources Development Internship Program  
Western Interstate Commission for Higher Education

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## A SOCIAL-ECONOMIC PROFILE OF THE SAN JUAN BASIN

SAN JUAN AREA OFFICE (COLORADO)

BUREAU OF LAND MANAGEMENT

Prepared by:

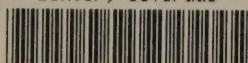
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August, 1974

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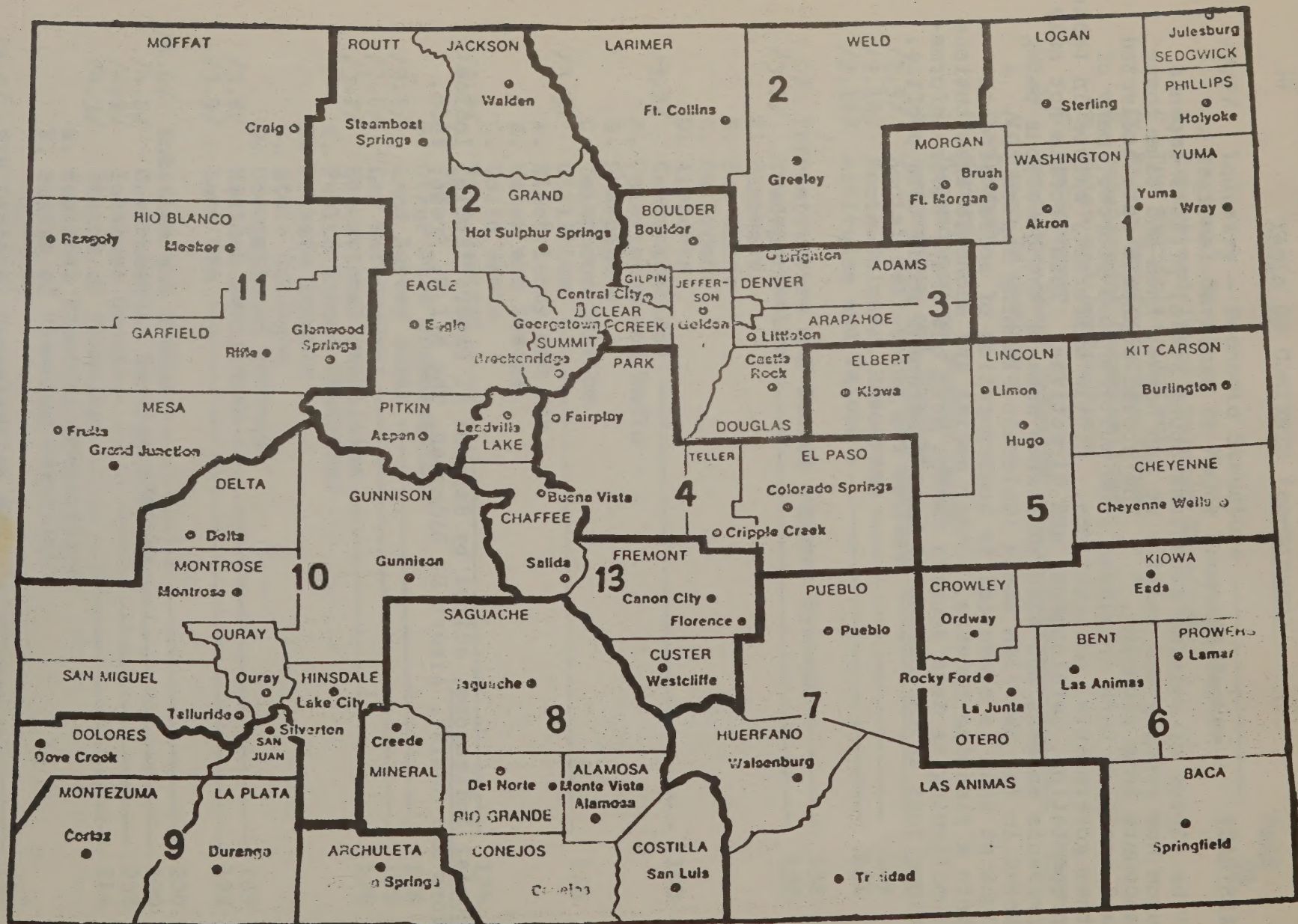
## ABSTRACT

"The virtue of raising questions about social effects depends upon how readily and validly we can answer them and take these accounts into planning. " \* The social-economic data collected and analyzed here originate from multifarious sources, many of them governmental publications. Little uniformity exists in their presentation, development, and directives. This profile not only presents answers but also addresses some of the questions being asked in the San Juan Basin (Colorado Planning Region #9). A look at both is essential to incorporation of social effects into a planning process. Other social and economic institutions functioning as data sources cannot help but shape their information, just as the Bureau of Land Management molds this profile.

\* Social Indicators, edited by Raymond A. Bauer, 'Social Indicators and Goals', Albert D. Biderman, The M.I.T. Press, 1966.



## COLORADO PLANNING REGIONS





## /1.0/ INTRODUCTION

### /1.1/ SOME HISTORY NOTES

The San Juan Basin was once occupied solely by American Indians. A prehistoric agricultural civilization developed on Mesa Verde southeast of present-day Cortez. Some believe that these cliff-dwellers moved farther south around 1300, due to pressure from outside groups or extended drought. When the Spanish began to filter in from population centers in present-day New Mexico, the area was the home of migratory hunters, the Ute Indians. The first Spanish expedition passed through in 1541 on an unsuccessful search for metals and a route to California around the southern deserts.

The San Juan Basin remained Spanish territory when the eastern part of present Colorado became U.S. Territory at the time of the Louisiana Purchase in 1803. It was not until 1848 and the conclusion of the Mexican War that the Treaty of Guadalupe Hidalgo allocated the San Juan Basin as official U.S. land. The Utes, still the primary residents of the region, were not consulted in the bargaining of the white men. During the early half of the nineteenth century, the fur-trading Mountain Men explored the San Juan Basin in their search for beaver and buffalo. Miners, then farmers, cattlemen, and sheepmen were soon to follow, demanding that the U.S. Government open up the Indian lands and provide military protection. The Territory of Colorado was organized and approved by the U.S. Congress in 1861.

In 1863, the Utes ceded the San Luis Valley (east of the San Juan Basin) to the whites, promising to move to a reserved area on the Western Slope. The whites negotiated another treaty in 1868 which forced the Utes west of the 107th meridian (which passes through the eastern portion of Archuleta County). Annual gifts of clothing, food, and supplies were promised by the federal government in return for these ceded lands. In 1873, the Brunot Treaty was negotiated with the Utes relinquishing a large quadrangular area which included the entire mining region of the San Juan Mountains. The treaty also designated one of the Ute tribal leaders, Ouray, as spokesman for the entire Ute nation.

On the Western Slope, there were now two concentrations of Utes, one to the north around the White River Agency and the other to the south around the Los Pinos Agency (Ouray resided here). Utes in the northern sector disliked the migration rate of the white man onto their land, as well as his socialization process, to the point of uprising against their federal agent, Nathan Meeker, and the troops Meeker had requested. Army troops were sent to Fort Lewis in the San Juan Basin in fear of a similar uprising by the Southern Utes, although such never occurred.



A final treaty was negotiated early in 1880. The Southern Utes were confined to a reservation on the La Plata River straddling the Colorado-New Mexico state line. (Colorado achieved statehood in 1876).

Many of the northern Utes were moved to Utah. Concerning the removal of the Utes from the State, the Denver Times commented: "Either they (the Utes) or we must go, and we are not going. Humanitarianism is an idea. He who gets in the way of it will be crushed."\*

The railroad came with the securing of most of the Indian lands by the whites. The town of Durango was initiated in 1881 by the Rio Grande Railroad just downstream from Animas City on the Animas River. The narrow-gauge line ran from Alamosa through Chama, New Mexico to Durango in order to transport the treasures of the San Juan mining region. The mines produced lead, zinc, silver, and gold. In 1882, the line was extended from Durango to Silverton. With an ore smelter and the railhead, Durango quickly became the supply distribution and trade center for all the San Juan Basin. There follows a listing of establishment dates of counties and incorporation dates of towns in the region:

<u>PLACE</u>	<u>DATE</u>
ARCHULETA	1885
Pagosa Springs	1891
DOLORES	1881
Rico	1880
Dove Creek	1939
LA PLATA	1874
Durango	1881
Bayfield	1906
Ignacio	1913
MONTEZUMA	1889
Mancos	1894
Dolores	1900
Cortez	1902
SAN JUAN	1876
Silverton	1885

It should be noted that San Juan County and Silverton reached their peak population in 1910 when the County held slightly over three thousand people. Archuleta County contained a similar number of people at its peak in 1920. Rico, in 1890, held just over one thousand people, compared to its present population of 300.

Many mines and the last of the Durango smelters shut down by 1933. Also during this depression period, farmers arrived in the region

\*A Colorado History by Carl Ubbelohde, 1965



(particularly Montezuma and Dolores Counties) from the drought-sticken Midwest. A short-lived uranium and vanadium boom occurred during World War II. In fact, the bomb materials for those atomic bombs dropped on Japan during that war came from the Durango area. Oil drilling became part of the region's economy around 1956. Although the main drilling had tapered off by 1964, roughly, the drilling has yet to stop completely.

### /1.2/ THE GEOPGRAPHICAL SETTING

The San Juan Basin has an extreme north-south width of 135 miles and an extreme length of about 270 miles. All told, the five counties together contain 4,139,183 acres of land. Three climatic zones exist here.

Rugged mountains cover the region in the east and most of the north, effectively isolating it from the rest of Colorado, particularly in winter. Ranging from 7,000 to over 14,000 feet in elevation, this climatic area receives twenty to sixty inches of precipitation each year. Over half of this falls in the form of winter snows. The frost-free season diminished with elevation, but can be as much as ninety days at 7,000 feet.

Going down, the mountains become foothills and then mesa tops ranging from 5,500 to 7,000 feet in elevation. This zone receives between twelve and twenty inches of precipitation, over half of which is again snow. The best agricultural soils have accumulated as wind-blown deposits on these mesas. The growing season last ninety days to one hundred twenty-five days (in the lower valleys) and is a limiting factor in crop selection. The zone lies diagonally across the region southwest of the mountains.

The third climatic zone, desert, is found mainly in the southwest portion of La Plata County and in the southern and western portions of Montezuma County. It should be noted that much of this desert occurs on either Indian lands in the south or BLM lands in western Montezuma County. In spite of mild winters and a frost-free season of 130 to 140 days, agriculture is primarily limited to low producing native range. Only eight to twelve inches of precipitation fall annually.

For all three zones, May and June are the driest months. The growing season is characterized by warm sunny days, cool nights, brisk dry air, and frequent afternoon thundershowers.

The streams of the mountains here are the beginnings of the Pacific Ocean. "Approximately 2.5 million acre-feet of water is produced annually by these streams with the majority being attributed to the San Juan. This represents a yield of 340 and 173 acre-feet per square miles drained per year for the San Juan and Dolores river basins respectively."\*

\*San Juan Resource Conservation and Development Project Plan, 1973.



However, the semi-arid climate to which the water falls from the high country makes the availability of water a precious issue. Natural water resources for each county are listed below:

#### ARCHULETA

San Juan River, its headwaters and tributaries.

#### DOLORES

Dolores River and its tributaries, plus some small tributaries of the San Juan River.

#### LA PLATA

Animas, Los Pinos, La Plata, and Florida Rivers; Hermosa and Vallecito Creeks; Electra Lake.

#### MONTEZUMA

Dolores and Mancos Rivers; Aztec, Beaver, Yellowjacket and McElmo Creeks.

#### SAN JUAN

headwaters of the Animas River and numerous small tributaries.

For a further discussion of water resources and irrigation, see section /2.8-F/ of this profile.

### /1.3/ REGION CONFIGURATION

The San Juan Basin is found in the southwest corner of Colorado. Its geographical isolation from the rest of the State provides the configuration rationale for making the Basin Colorado Planning Region #9. (The terms San Juan Basin and Region #9 are synonymous in this profile).

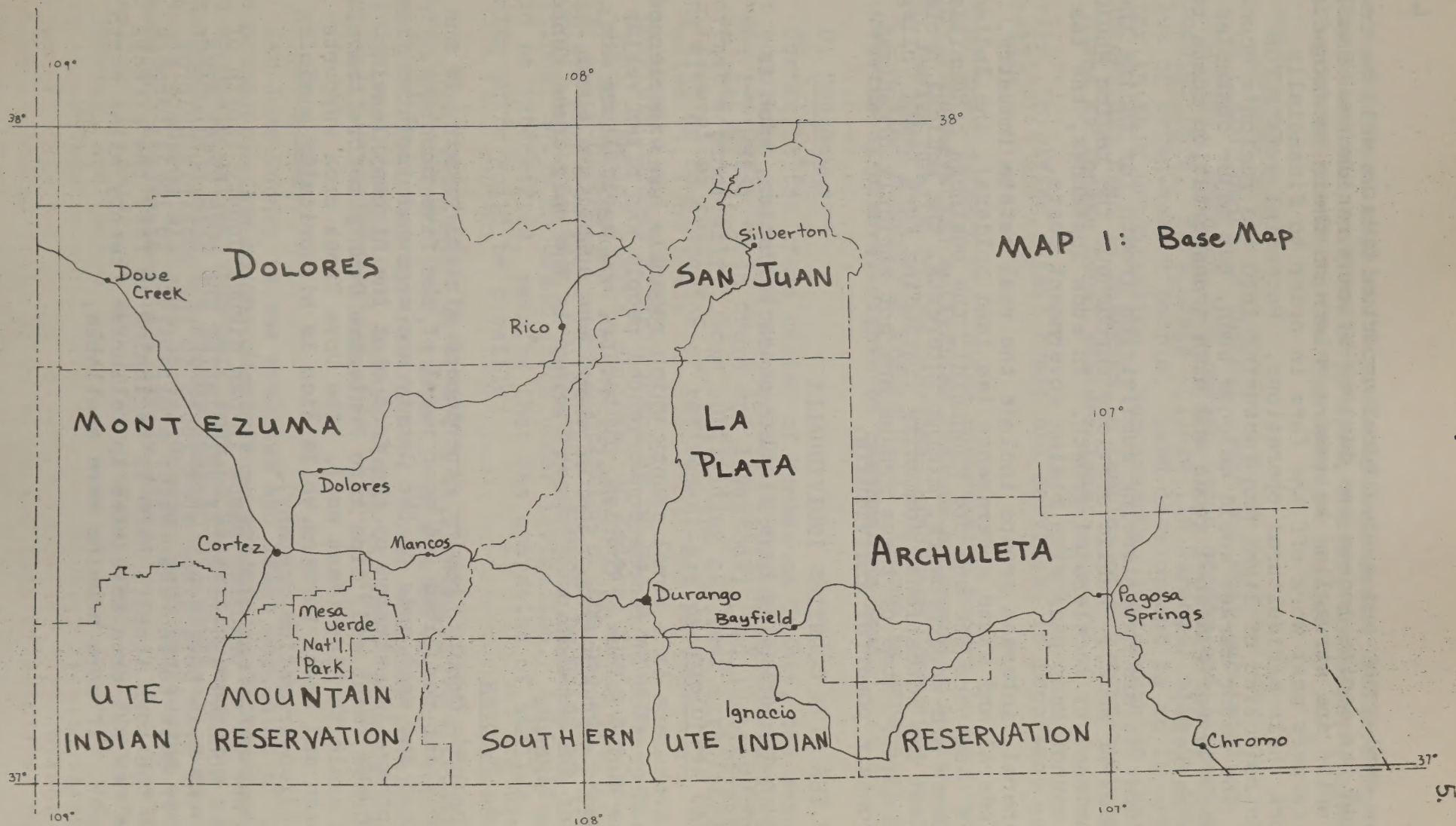
Two alternative aggregations are possible. The first would relate Region #9 to adjacent areas in New Mexico and Utah, along the southern and western Colorado state line boundaries. A second realignment would subdivide Region #9; Montezuma and Dolores Counties form one sub-unit, while La Plata and Archuleta Counties form another. San Juan County is geographically isolated from the rest of the region, but otherwise would join with La Plata and Archuleta Counties rather than with the Montezuma section.

Map 1 is the base map for the rest of the regional maps used in this profile.

### /1.4/ THE 5 COUNTIES TOGETHER

The San Juan Basin is basically a rural area with its economy based in agriculture, tourism, and to a lesser extent, the extractive industries of lumbering and mining. Private automobiles are almost the only means of transportation within the region. The highway network greatly influences the growth or decline of smaller communities. Larger towns, such as Durango, Cortez, and Pagosa Springs, are major trade centers and easily accessible by auto. The tourism industry is also largely dependent upon the use of private automobiles. The effect of future increased costs of gasoline (or lack of gasoline) on the tourism industry is as yet unknown.







Better employment and agricultural opportunities as well as increased per capita income are desired by many residents. Small farm units are struggling to make a return on their investments. Some farmers must work off the farm in order to financially support their agricultural operations. Potential exists for the introduction of light manufacturing into the region's economy. The labor market would welcome such, but major obstacles are markets for finished goods and high transportation costs to those markets.

The Counties are experiencing subdivision growth (or facing the prospect of such). Public services throughout the region would be burdened by accelerated growth. In such instances, the tax base cannot keep pace with rising government costs.

In general, interest groups include the real estate industry, the federal and state governments (as land holders), the Indian tribes (Southern Ute and Ute Mountain), the business communities, cattlemen and wool growers, mining interests, the medical profession, and the educational community (including Fort Lewis College in Durango). Some of these groups are not strictly organized, but contain powerful individuals.

#### /1.5/ THE FIVE COUNTIES INDIVIDUALLY

Although the counties have similar characteristics, each is distinct:

##### A. Archuleta

Archuleta is a rural county which recently has experienced an in-migration of recreation-oriented people who often reside in new subdivisions. Tourism, lumbering, and agriculture are important economically. Spanish-Americans constitute about half of the population. Pagosa Springs is the only trade center of the county.

##### B. Dolores

Dolores County, having experienced minimal growth, is one of the least populated and most rural of the five counties. The west and east ends of the County are somewhat isolated from each other, illustrated by the fact that the highway leaving Dove Creek (west end) dips into Montezuma County before traveling north again to Rico (east end). The Dove Creek area supports dry bean and wheat farmers, while Rico is historically a mining town (Rico-Argentine Company).

A new series of uranium leases in San Miguel County (North of Dolores County) is presently stimulating the Dove Creek area. Also, the arid Dove Creek area looks to the possible Dolores River Project to increase water availability to local farmers and to the town itself. Rico is beginning to feel the effects of the new ski area developed in Telluride (twenty miles north of Rico). If more housing were available,



Rico's ski population would probably increase. Invigoration of mining interests, particularly gold, silver, and copper, also could produce growth in the Rico Area.

### C. La Plata

La Plata County is the most urban and most populated of the counties. Durango, the region trade center and largest town, is located here. Fort Lewis College (in Durango) adds to the influx of urban-valued people. Land development is an important factor in this urbanization. For example, just south of the Purgatory Ski Area is Tamarron, a complex of 800 condominiums on 500 acres of former rural pasture land.

Tourism, involving retail trade and services, is important economically.

Most of the Southern Ute Indian reservation occurs in La Plata County. Reservation activities include a Community Action Program, Public Health Indian Services, PinoNuche Community Center, and a boarding school for grades 4-12. Income is generated by the leasing of mineral rights of reservation land.

### D. Montezuma

Cortez is the trade center of Montezuma County, the second most populated county in the region. Tourism, agriculture (both dry and irrigated, both crops and livestock), and lumbering are important economically. Some subdividing has been experienced, along with an in-migration of retirement-age people.

The possible Dolores River Project is of major concern. In the final planning stages, approval of federal funds are required for construction. The completion of the project would stimulate both irrigated and dryland farming, bringing an additional 24-30 thousand acres under irrigation. Agriculture would be intensified, meaning that the operation of smaller farming units would be possible.

The Ute Mountain Indian Reservation is located in this county. As with the Southern Utes, income is generated from the leasing of natural resources mineral rights. Other economic development includes a pottery plant, a park similar to Mesa Verde National Park, and irrigated farmland.

### E. San Juan

San Juan County is the smallest and least populated of the five counties. Due to the county's geographic isolation in a high mountain valley, the main town of Silverton becomes a close-knit community during the winter months. No subdivision development has occurred although Jarvis Meadow, just inside the county line north of Purgatory is a likely site.



## /1.6/ ISSUES

### A. Rights of Private Ownership

This is the most important issue in the region. Do individuals have the right to do as they will with private property or does the government have the right to prescribe and enforce land uses? This is a prime question in the San Juan Basin, involving land development, land use, and zoning. It also involved the quandry in which region residents find themselves when attempting to evaluate what growth development will and how such growth will effect them as individuals.

### B. Air Port Expansion

Discussion has occurred concerning either a new regional airport or the expansion of La Plata County Airport. Air transportation is viewed as essential if the region is to compete in the market for new industry. Again, however, some people question the personal benefits.

## /1.7/ THIS PROFILE AND THE BLM PLANNING PROCESS

This Social-Economic Profile, based on Colorado BLM Manual 1606, provides human data for use in an otherwise resource-oriented system of determining the best uses of BLM public lands. In the Planning Area Analysis (Manual 1607), the information of this profile joins resource information developed by Unit Resource Analysis (Manual 1605). The Planning Area Analysis develops social, demand (economic), institutional, legal and policy, and environmental screens for use in the Management Framework Plan (Manual 1608).

The time-frame of this profile centers on 1970-1974. Some data comes from the 1950's and 1960's, while projections are made to 1980 and 1990.

## /1.8/ RECOMMENDATIONS

A. To continue as a useful tool, this profile should be updated with the publication of the 1980 Census, as this is currently one of the most detailed and comprehensive of available data sources. Other updating should occur with the publication of more specific interest areas.

B. This profile is a general study of the San Juan Basin. Serious need exists for more intensive detail of localized areas. The BLM and other groups undertaking similar projects are encouraged to cover less physical area (say, one county as opposed to five) in greater detail than to continue allocating funds for broad studies.

C. BLM decisions do affect the residents of the San Juan Basin. A wide range of alternatives should be considered be-



fore decisions are made. For example, should there be a request for a highway right-of-way through BLM land, the alternatives to this use as well as the benefits of this use are necessary considerations. Which use of BLM land will have the greatest long-range benefits to the areas's citizens, as a highway site or as less-disturbed open space in the human environment and wildlife habitat?

D. A desire for increased coordination among planning and governmental entities in the region was expressed in the Status of Planning Checklist (see /4.3-B ). BLM has held an inter-agency meeting and more would be useful in realizing a working system of coordination among these groups.

#### /1.9/ Acknowledgements

I thank Ed Parsons, Bill Reynolds, Jerry Kendrick, and the other BLM employees in the Durango Area Office who have been most informative and patient. Also, thanks be given to my typists for enduring the manuscript.



/2.0/ SOCIAL-ECONOMIC FACTORS/2.1/ POPULATIONA. Numbers

The San Juan Basin (Region #9) has an estimated 1974 population of 42,100. This represents about 1.7 percent of Colorado's total population of 2,526,600. Table 1 shows present estimates and past census-year numbers for the five counties of the region, along with populations of the major towns within those counties. Region totals, State totals, and census-year numbers for the eleven western states are shown for comparison. It should be noted that the two columns showing "% Change" in population are only indirectly comparable to each other as their time-frames differ. Only if both were tabulated for full decades would they be directly comparable. This is not the case here. Of course, data within each column is directly comparable to data within that same column.

Using the 1974 estimates, almost 88 percent of Region 9's population reside in La Plata (22,200) and Montezuma (14,700) Counties. La Plata County is the largest of the five counties in numbers of population and also contains the only town in the region large enough to be termed a city, Durango (11,700). Cortez (6,600) in Montezuma County is the next largest town, with Pagosa Springs (2,000) in Archuleta County following as a distant third.

The population trend between the 1960 and the 1970 census was slightly downward for the region as a whole. However, a reverse of this trend seems to be indicated by estimates since 1970 in La Plata, Montezuma, and Archuleta Counties. Dolores and San Juan Counties continue to register slight population decreases. The growth in population in the San Juan Basin has been much, much slower in the past decade than that of the state as a whole. (% change 1960-1970: Colorado = 25%; Region 9 = -4%). However, this gap has showed signs of lessening since 1970. (% change 1970-1974: Colorado = 13%; Region 9 = 11%). For national comparison Colorado was the seventh fastest growing state during the 1960-70 decade.

For an indication of even smaller clusterings of population, see Map 2 following Table 1. Also, present population estimates should be compared with the population projections discussed later in section /2.1-G/.

B. Age and Sex Distribution

Table 2 shows both numbers and associated percentages by age groups and totals for each of the five counties, Region 9, and Colorado. Totals are compared with the population estimates given in Table 1. Also shown is median age, defined as the age which divides the population in half. Fifty percent of the population is younger, and fifty percent is older than the median. (Discrepancies result from the fact that the Colorado Department



TABLE 1: POPULATION NUMBERS

AREA	1950	1960	1970	% CHANGE 1960-1970	1974 <u>1/</u>	% CHANGE <u>3/</u> 1970-1974
County:						
ARCHULETA	3,030	2,629	2,733	4	2,800	2
Pagosa Springs *	1,379	1,374	1,360	- 1	2,000	32
DOLOROS	1,966	2,196	1,641	-25	1,600	- 3
Dove Creek *	702	986	619	-32	600	- 3
Rico	212	353	275	-22	300	8
LA PLATA	14,880	19,225	19,199	0	22,200	14
Bayfield	335	322	320	- 1	390	18
Durango *	7,459	10,530	10,333	- 2	11,700	12
Ignacio	526	609	613	1	1,000	39
MONTEZUMA	9,991	14,024	12,952	- 8	14,700	12
Cortez *	2,680	6,764	6,032	-11	6,600	9
Dolores	729	805	820	2	850	4
Mancos	785	832	709	-15	890	20
SAN JUAN	1,471	849	831	- 2	800	- 4
Silverton *	1,375	822	797	- 3	770	- 4
REGION #9	31,338	38,923	37,356	- 4	42,100	11
COLORADO	1,325,089	1,753,947	2,207,259	26	2,526,600	13
11 WESTERN STATES <u>2/</u>	19,561,114	27,193,698	33,737,365	24		

SOURCE: U.S. Department of Commerce, Bureau of the Census, except 1/.

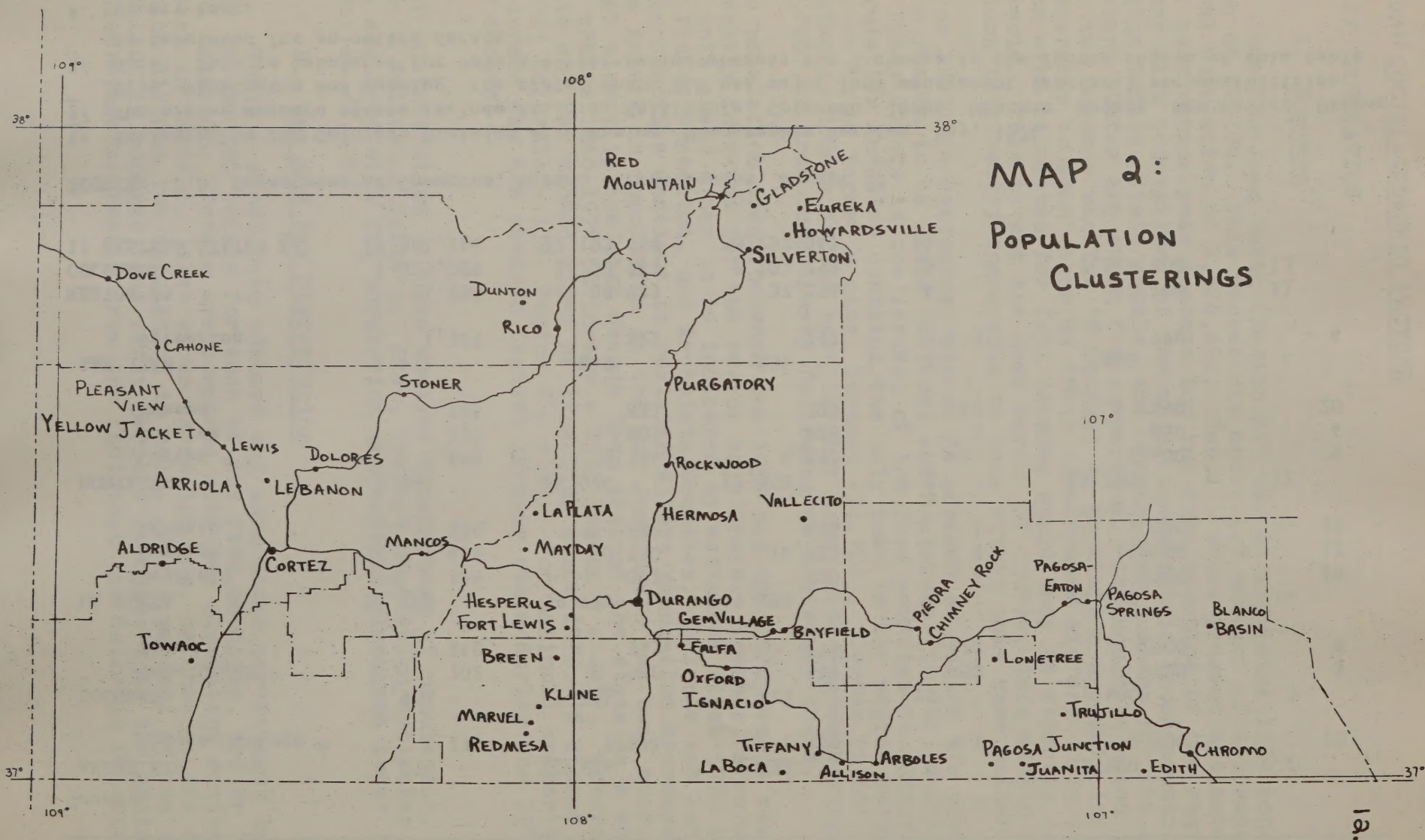
1/ Estimates by the Colorado Division of Planning, Demographic Section, May, 1974.

2/ The eleven western states include Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington and Wyoming, the states where BLM has major land management (surface) responsibilities.

3/ Note: This is tabulated for only a 4-year period whereas the % change in the fourth column of this table is tabulated for an entire decade.

\* County seat.







of Health based their tabulations in Table 2 on June, 1973 estimates of population from the Colorado Division of Planning, Demographic Section, whereas Table 1 uses May, 1974 estimates from the Division of Planning.) Population pyramids for 1970 county and State populations follow Table 2.

The Colorado population pyramid shows a fairly normal distribution among age groups. The age groups from 65+ to 20-24 show decreasing percentages with increased age. Age groups below the 20-24 group decrease with decreasing age, reflecting decreasing birth rates since the post-World War II baby boom.

In general, the age distributions of the counties and the region as a whole are similar to that of the state, with the following exceptions:

- a) In Archuleta County, the 5-14 age group has a noticeably higher percentage than the state and county figures. (Archuleta = 25.4%; Colorado = 18.8%)
- b) Also in Archuleta County, the 15-24 age group has a noticeably higher percentage than the state and county figures, indicating that young people tend to leave the county after high school age. (Archuleta = 15.0%; Colorado = 20.5%).
- c) The percentages for the 25-44 age group are somewhat lower for each of the five counties than for the state. (See Table 2). This could be an indication of limited available employment which prevents more middle-aged people from moving into the region.
- d) The percentages for the 45-64 and 65+ age groups are somewhat higher for each of the five counties than for the state (see Table 2), except for the 65+ age group in San Juan County which is noticeably lower than the state figure. (San Juan = 5.7%; Colorado = 8.0%). This suggests the attractiveness of the region to retired persons from other areas.

Only San Juan County shows a greater percentage of males than females, the reverse being true in the other counties, the region as a whole, and the state. However, all of these figures are very near a 50/50 (male/female) breakdown.

### C. Vital Statistics and Health

Table 3 gives both numbers of resident births and deaths which occurred during 1973 and 1972 births, deaths, marriages, and marriage dissolutions and annulments with the accompanying rates per 1,000 population.

A major use of birth and death statistics is the calculation of migration rate. By knowing how many people have been born or have died and comparing this with how much the population of an area has increased overall, one can determine how much of a population change is caused by people moving into or out of the area.



TABLE 2: AGE AND SEX DISTRIBUTION

Age Groups	Archuleta	Dolores	LaPlata	Montezuma	San Juan	Region # 9	Colorado
under 5	143 ( 6.4%)	105 ( 6.9%)	1,558 ( 7.4%)	931 ( 6.8%)	76 ( 8.8%)	2,813 ( 7.1%)	202,096 ( 7.8%)
5 - 14	569 (25.4%)	271 (17.8%)	3,671 (17.4%)	2,724 (19.8%)	149 (17.3%)	7,384 (18.7%)	486,483 (18.8%)
15 - 24	335 (15.0%)	330 (21.7%)	4,863 (22.9%)*	2,954 (21.4%)	174 (20.3%)	8,656 (21.9%)	529,464 (20.5%)
25 - 44	500 (22.4%)	459 (20.6%)	4,965 (22.4%)	3,077 (22.3%)	217 (25.2%)	9,218 (23.3%)	695,999 (26.9%)
45 - 64	458 (20.5%)	342 (22.4%)	4,186 (19.8%)	2,796 (20.3%)	195 (22.7%)	7,977 (20.2%)	463,142 (17.9%)
65+	235 (10.5%)	165 (10.8%)	2,131 (10.1%)	1,300 ( 9.4%)	49 ( 5.7%)	3,880 ( 9.8%)	207,200 ( 8.0%)
Total	2,240	1,524	21,145	13,782	860	39,551	2,584,383
TABLE 1 Population estimates	2,800	1,600	22,200	14,700	800	42,100	2,526,600
All Males	1,064 (47.5%)	752 (49.3%)	10,428 (49.3%)	6,802 (49.4%)	455 (52.9%)	19,501 (49.3%)	1,268,994 (49.1%)
All Females	1,176 (52.5%)	772 (50.7%)	10,717 (50.7%)	6,980 (50.6%)	405 (47.1%)	20,050 (50.7%)	1,315,389 (50.9%)
Median Age	25.4 years	27.9 years	26.3 years	27.4 years	26.3 years	26.7 years	26.2 years

SOURCE: Colorado Department of Health, based on population estimates from the Colorado Division of Planning, Demographic Section, June, 1973.

\* May reflect presence of Fort Lewis College.



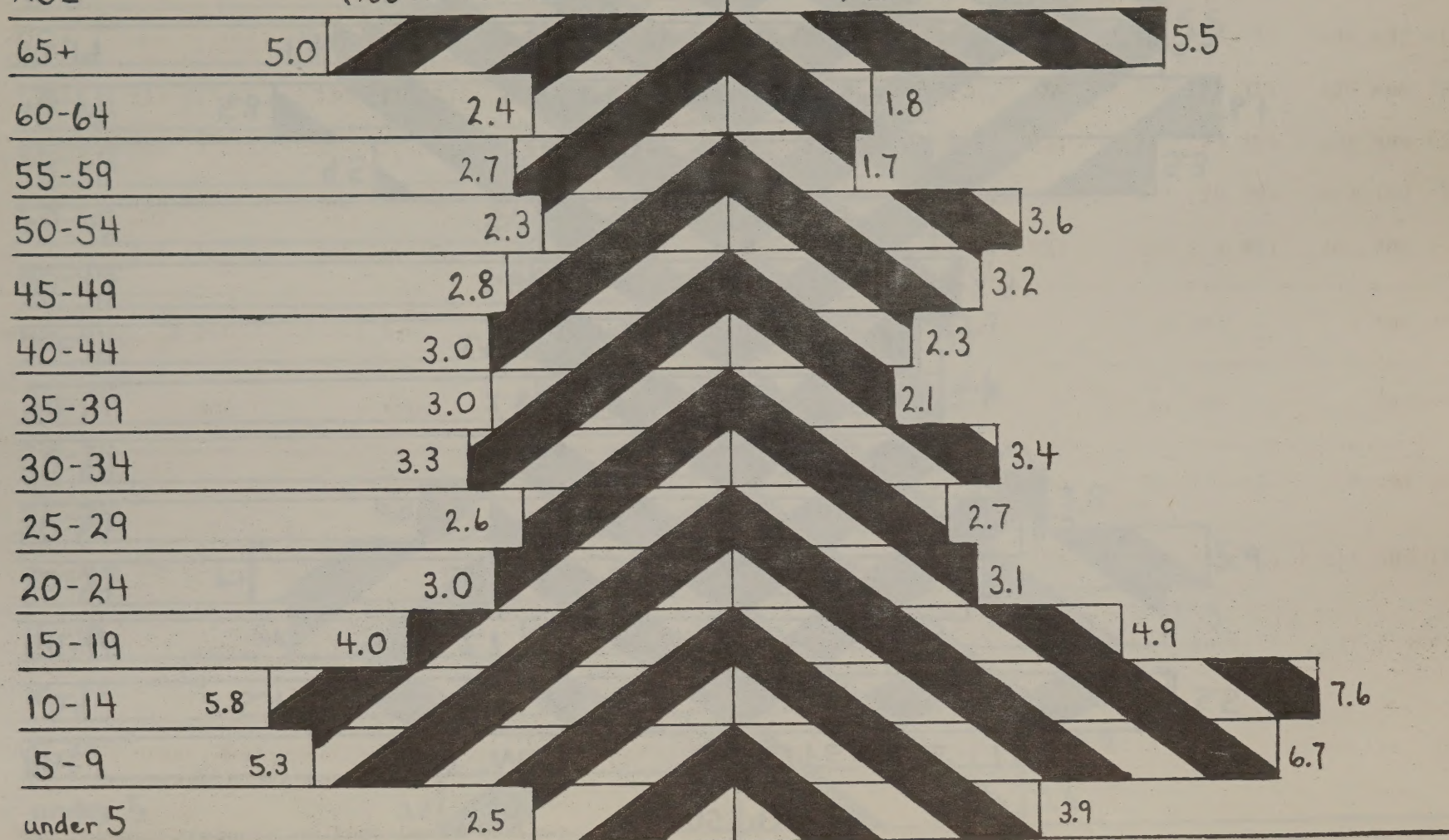
# ARCHULETA

(2240)

AGE

(1064) MALE

FEMALE (1176)

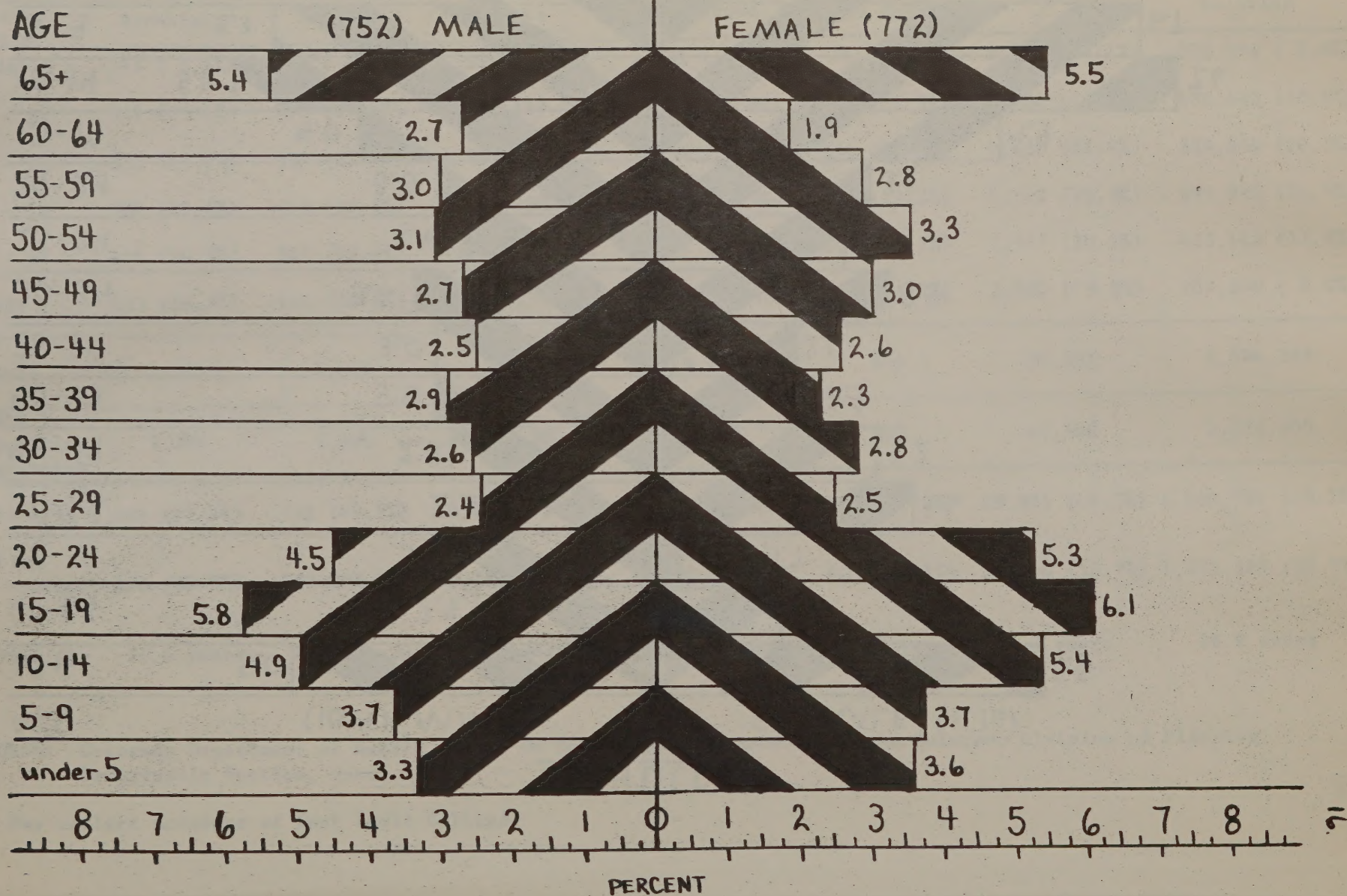


PERCENT



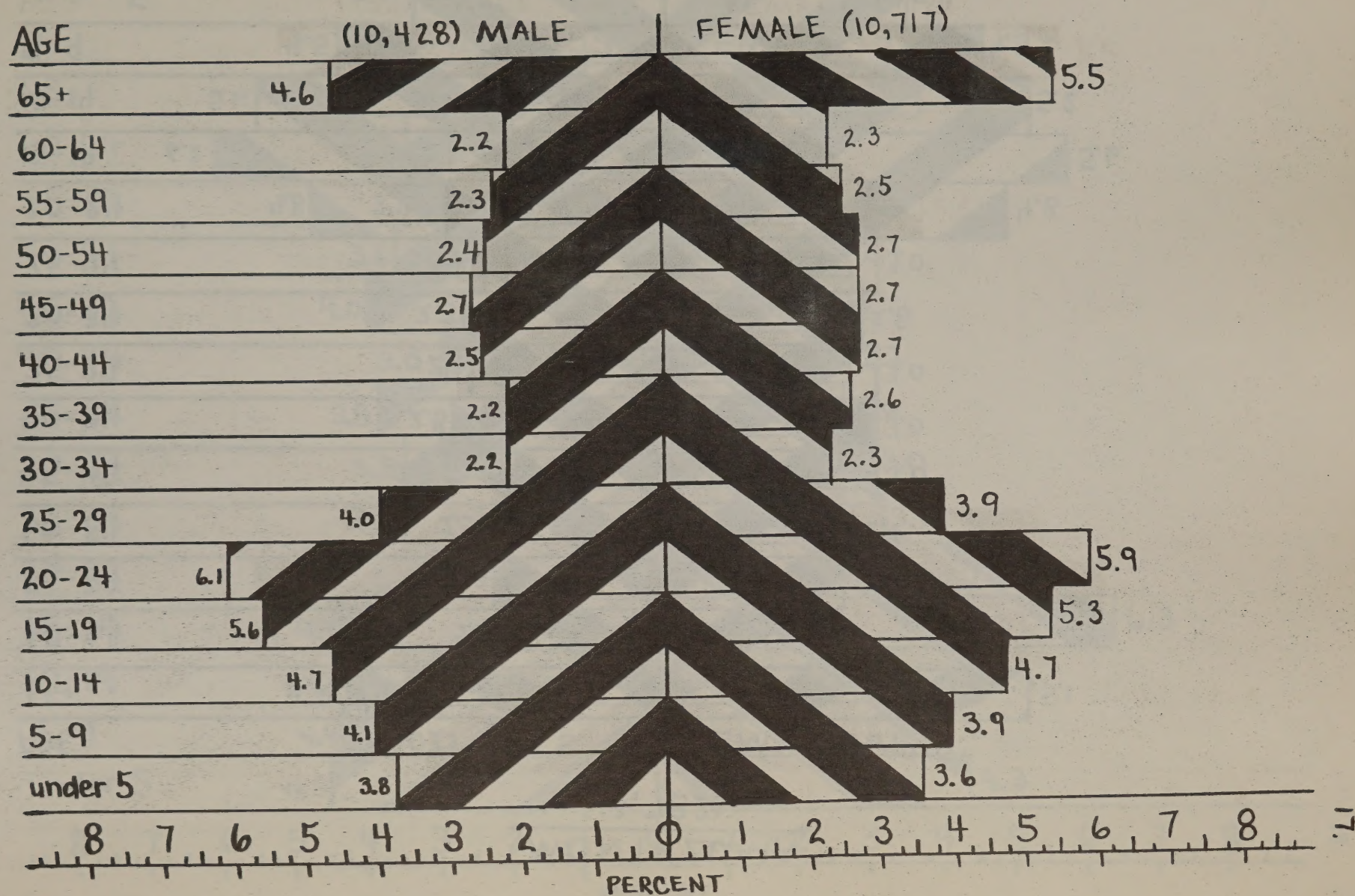
# DOLORES

(1524)





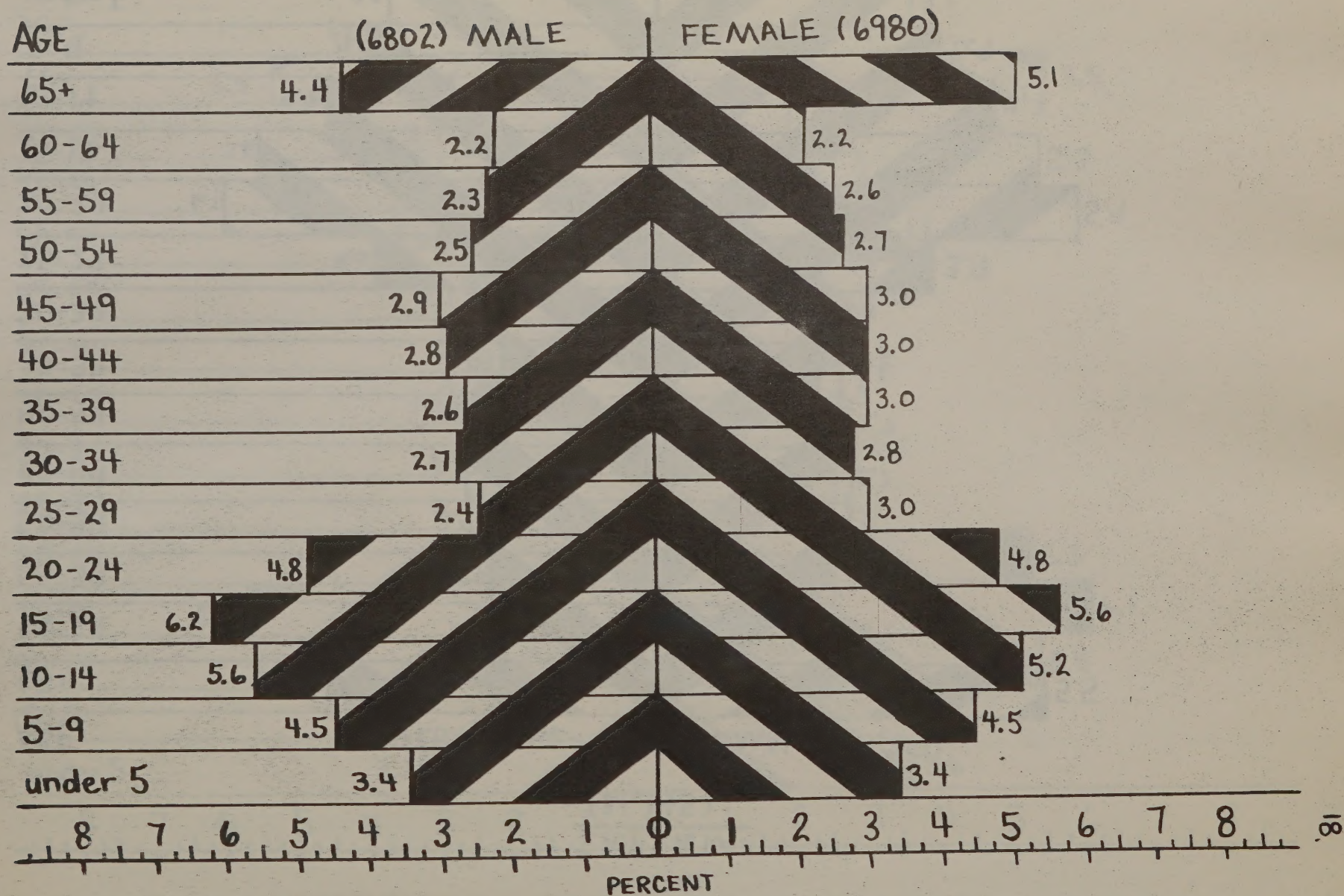
LAPLATA  
(21,145)





# MONTEZUMA

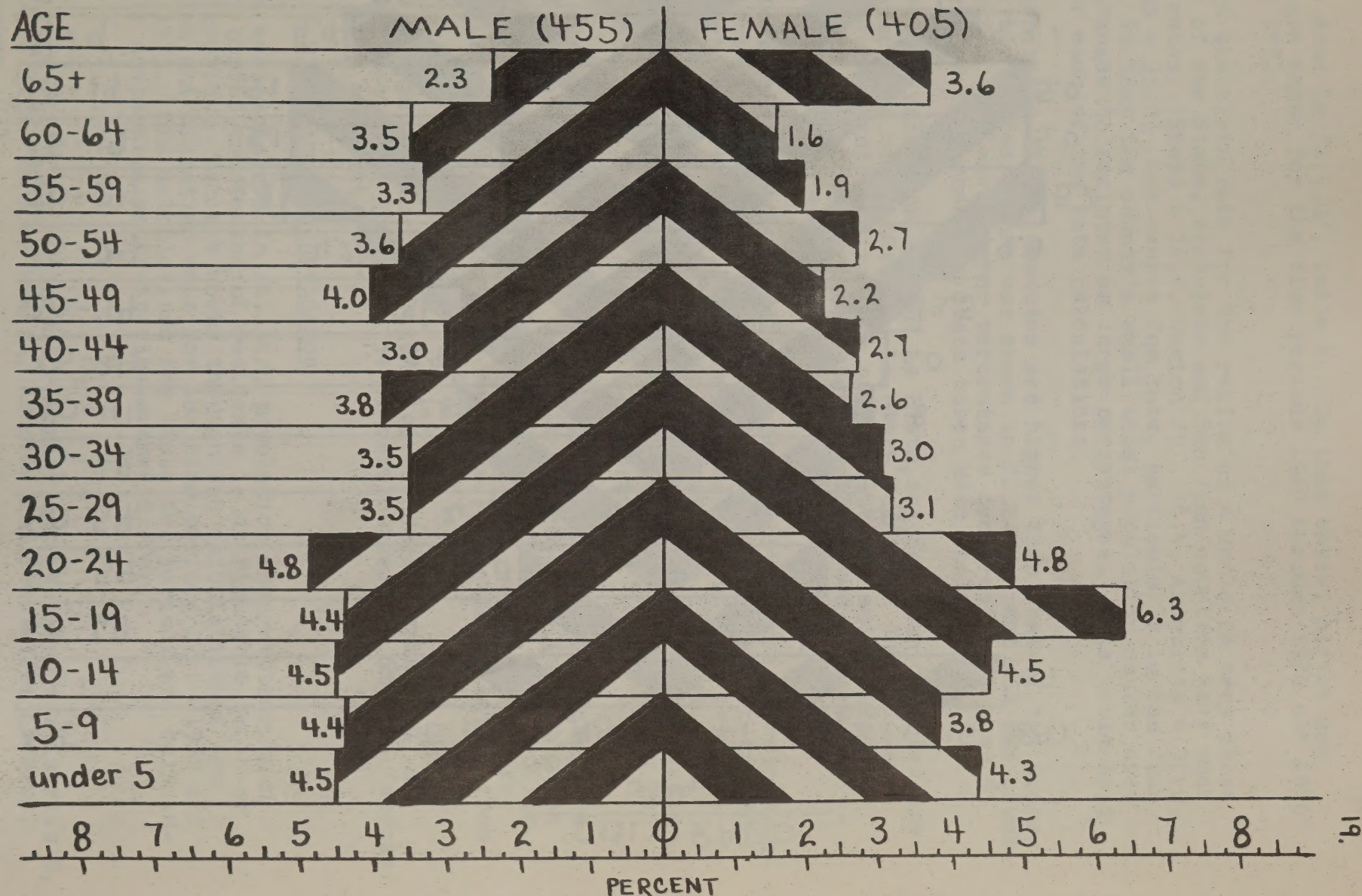
(13,782)





# SAN JUAN

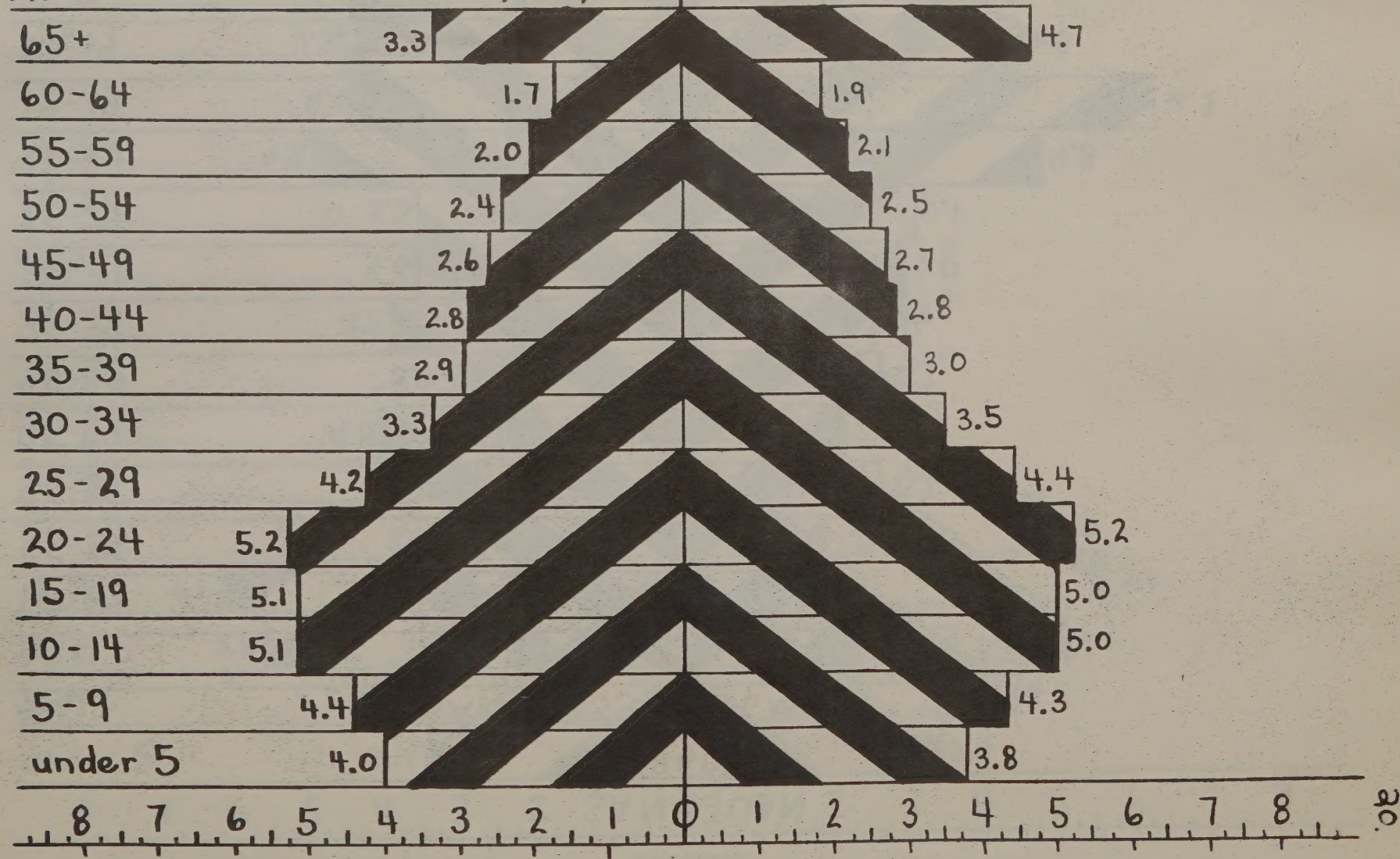
(860)





COLORADO  
(2,584,383)

AGE                      MALE (1,268,994)      FEMALE (1,315,389)





This is done in /2.1-D/, Table 4. On that table, births and deaths are shown for the time periods 1960 through 1970 and 1970 through 1973.

Although the birth rate for the region as a whole is very close to that of the State, Archuleta and San Juan counties have much higher rates. (State = 16.6, Region #9 = 16.4, Archuleta = 30.0, San Juan = 35.0) One reason for this, particularly in San Juan County, is that the county's small total population causes even small changes to register as large percentages. This could hold true for each of the rate calculations.

The death rates of the counties are higher than that of the State. This partly reflects what was shown in /2.1-B/, that all the counties but San Juan have higher percentages over residents over 65 years of age than does the State taken as a whole.

The marriage rates for all but La Plata and San Juan Counties are lower than that of the State. La Plata County is the only one to exceed the State in its rate of dissolutions and annulments. This points to a comparatively high marriage rate and the influence of urban-oriented values in the people of this County.

The Colorado State Department of Health reported more streptococcal infections than any other disease of people in the region in 1972. (102 cases were reported.) Gonorrhea was the 2nd most reported disease with 76 cases. Influenza follows with 58 cases. This same ranking occurred in the Colorado figures. Twenty-one cases of tuberculosis were reported in that year, mainly occurring in the Ute Mountain Tribe, southwest of Cortez.

"Heart disease, cancer, stroke, and accidents are, in order, the prevailing leading causes of death in Colorado and the nation as a whole, and are therefore the only causes shown in this profile. However, because of small number effect, some counties with few deaths during a particular year may have reflected deviation from this." \*

In 1972, 98 people in the region died of heart disease, 64 of malignant neoplasms (cancer), 34 of cerebrovascular disease (stroke) and 36 from accident.

#### D. Migration and Residence

As was explained in /2.1-C/, population change other than that by births and deaths of residents is attributable to in-or out migration. Table 4 works through the calculation of net migration and migration rate for the time periods 1960-1970 and 1970 - 1973. The calculations for these two periods are only indirectly comparable as their time-frames differ.

\* Demographic Profile, Colorado Planning and Management, District 9, Colorado Department of Health, Records and Statistics Section, September 1973.



TABLE 3:  
VITAL STATISTICS - 1972-1973

COUNTY (1973)	BIRTHS BY RESIDENT MOTHERS	DEATHS OF RESIDENTS
Archuleta	50	18
Dolores	15	8
La Plata	321	218
Montezuma	246	142
San Juan	19	7

(1972)	LIVE BIRTHS	TOTAL DEATHS	MARRIAGES	DISSOLUTIONS & ANNULMENTS
Archuleta-# rate	72 30.0	20 8.3	21 8.8	6 2.5
Dolores-# rate	21 13.1	15 9.4	11 6.9	1 0.6
La Plata-# rate	298 14.1	184 8.7	252 11.9	125 5.9
Montezuma-# rate	242 17.3	124 8.9	145 10.4	59 4.2
San Juan-# rate	28 35.0	9 11.3	18 22.5	3 3.8
Region-# rate	661 16.6	352 8.8	447 11.2	194 4.9
Colorado-# rate	38,585 16.4	17,856 7.6	27,095 11.5	12,604 5.3

\* Live Birth Rate - Total live births per 1,000 population.  
Death Rate, Marriage Rate, and Dissolution-Annulment Rate  
are figured similarly, per 1,000 population.

SOURCE: Colorado Department of Health.



From 1960 to 1970 all five counties tallied net out-migration (negative). Since 1970, however, the picture has been changing. The region as a whole registers a net in-migration (positive) rate slightly higher than that of Colorado (Colorado= 7.1, Region #9 = 7.7). La Plata County shows a similar in-migration rate. Montezuma County's migration rate is positive also, though smaller than that of La Plata County. The rest of the counties are still registering negative migration rates. That of San Juan County is particularly high.

Interestingly, Archuleta County had population increases inspite of out-migration for both time periods. This indicates a birth rate high enough and/or a death rate low enough to keep the population increasing inspite of people moving away. The other counties registered either population decreases accompanied by out-migration or population increases accompanied by in-migration.

The desire to live in the tremendous natural setting offered in the region is one of the main in-migratory forces affecting the population. The tourist industry is helping both to familiarize people elsewhere with the region and, to a lesser extent, to offer people jobs when they move here. (For example, no documentation exists of the number of Texans who have moved into the region or who reside here only during the summer months, but they are a noticeable group involved with these migration rates.) From this point of view, in-migration can be expected to continue as long as these incoming people can find a way to earn an economic living.

During the 1960-1970 period, young people of the region tended to migrate out after graduating from high school and establishing a degree of independence. This is typical of rural, agricultural areas. Various socio-economic problems are related to a heavy out-migration of the resident youth, "including lack of capable young community leaders to replace those retiring or dying, lack of workers for proposed new industries, and changes in the need for community facilities and services for specific age groups (schools and retirement\* homes, for example) which in turn may cause local finance problems."

The 1970 census (see /2.1-B/) showed that this phenomenon, as quoted by Volker, had declined in the region, with the exception of Archuleta County, indicating that more young people are now tending to make their home in the region of their upbringing.

Table 5 shows some residence characteristics of people in the region in 1970. The percentage of people who lived in the same county in 1965 as in 1970 ranges from 66% in Montezuma County to 42% in San Juan County, with the other counties falling inbetween.

\*Population Change and Net Migration by counties in the Great Plains States, 1960-1970, Stanley W. Volker, Department of Agricultural Economics, North Dakota State University, Fargo, North Dakota, June 1971.



TABLE 4: MIGRATION

POPULATION				COMPONENTS OF CHANGE			
				(1960-1970)		(1970-1973)	
1960	1970	1973	% change (1960-1970) (1970-1973)	Births	Deaths	Derived Net Migration	Migration Rate
Archuleta	2,629	2,733	+ 4	693	220	-369	-14.0
	"	2,700	0.1	200	100	-100	- 5.4
Dolores	2,196	1,641	-25.3	447	146	-856	-39.0
	"	1,600	- 0.5	100	50	50	- 2.6
La Plata	19,255	19,199	- 0.1	3,802	1,804	-2,024	-10.5
	"	21,000	9.6	1,100	600	1,300	7.0
Montezuma	14,024	12,952	- 7.6	2,891	1,128	-2,835	-20.2
	"	13,600	4.9	800	400	2,000	1.6
San Juan	849	831	- 2.1	210	89	- 139	-16.4
	"	700	-10.5	100	50	- 100	-15.6
Region #9	38,923	37,356	- 4	8,043	3,387	-6,223	-16.7
	"	39,600	6.3	2,300	1,200	3,050	7.7
Colo- rado	1,753,947	2,207,259	25.8	395,899	163,052	220,465	12.6
	"	2,437,000	10.4	129,000	58,000	156,000	7.1

SOURCES: 1960 and 1970 data are from Population Change and Net Migration by counties in the Great Plains States, 1960-1970, Stanley W. Volker, Department of Agricultural Economics, North Dakota State University, Fargo, North Dakota, June, 1971.

1973 data are from U.S. Department of Commerce, Bureau of the Census, Current Population Reports, Population Estimates, Series P-26, No. 62, April, 1974.



TABLE 5: RESIDENCE, 1970

	Archuleta	Dolores	La Plata	Montezuma	San Juan	Region #9
Total Population	2,733	1,641	19,199	12,952	831	37,356
Born in State of Residence	1,543	665	10,505	6,613	523	19,849
%	56.5	40.5	54.7	51.1	62.9	53.1
Same house as 1965	1,282	579	8,381	6,192	263	16,970
%	46.9	35.3	43.6	47.8	31.6	45.4
Different house (same county) in 1965	323	431	3,591	2,370	86	6,301
%	11.8	26.3	18.7	18.3	10.3	16.9
Different county (same state) in 1965	233	224	1,710	851	153	3,171
Different state in 1965	326	145	2,718	1,769	69	5,027
Abroad in 1965	23	--	93	29	30	165
Moved, 1965 resident not reported	288	56	1,350	566	45	2,305

SOURCE: U.S. Census, General Social and Economic Characteristics, 1970.



### E. Population Density and Urban-Rural Populations

In understanding the nature of a region, it is important to know the extent of urbanization in that region. Durango and Cortez are the most urban areas of Region #9, containing about half the populations of their respective counties. However, these towns compare little with the degree of urbanization on Colorado's Front Range. With respect to the rural population, Dolores County approaches a 50/50 breakdown between rural people living on farms and rural people not living on farms. By Bureau of Census definition, "occupied housing units are classified as farm units if they are located on places of 10 or more acres from which sales of farm products amounted to \$50 or more in 1969, or on places of less than 10 acres from which sales of farm products amounted to \$250 or more in 1969." San Juan County is said to have no rural farm population. The other counties show a smaller farm than non-farm population. This is all quantified in Table 6, along with population density.

I cannot specifically account for the discrepancies between total population figures and the sum of urban and rural figures. However, these discrepancies do not greatly distort the picture of urban-rural breakdown.

The population density for Colorado in 1970 was twenty-one persons per square mile. La Plata County had the highest density of the region, eleven persons per square mile. Montezuma followed with six persons per square mile. These two counties hold the largest population centers of the region, Durango and Cortez. People tend to locate near these population centers due to job availability and subsequently, to availability of consumer goods. The other three more rural and less populated counties each have population densities of two people per square mile. The population density of the region as a whole comes to six persons per square mile. Map 3 following Table 6 depicts a 1973 rendering of population density.

### F. Ethnic and Minority Composition

The population of this region for the most part consists of three groups: the Whites, the Spanish-Americans, and the Indians. Whites by far dominate the percentages in all but Archuleta County. In Archuleta, Whites and Spanish-Americans are split roughly 50/50. Almost no Spanish-Americans reside in Dolores County. Indians reside mainly in Dolores, La Plata, and Montezuma Counties, holding percentages of 9, 5, and 8 in those respective counties. The highest percentage of Indians occurs in Dolores County, but the largest number of Indians reside in La Plata and Montezuma Counties, where the bulk of Southern Ute and Ute Mountain Indian Reservations are located. Blacks, Orientals, and others together make up less than 1% of the population of each county. Ethnic groups are detailed for 1970 in Table 7.

Table 8 shows the country of origin of those people not of recent American origin. The largest representations originated in the

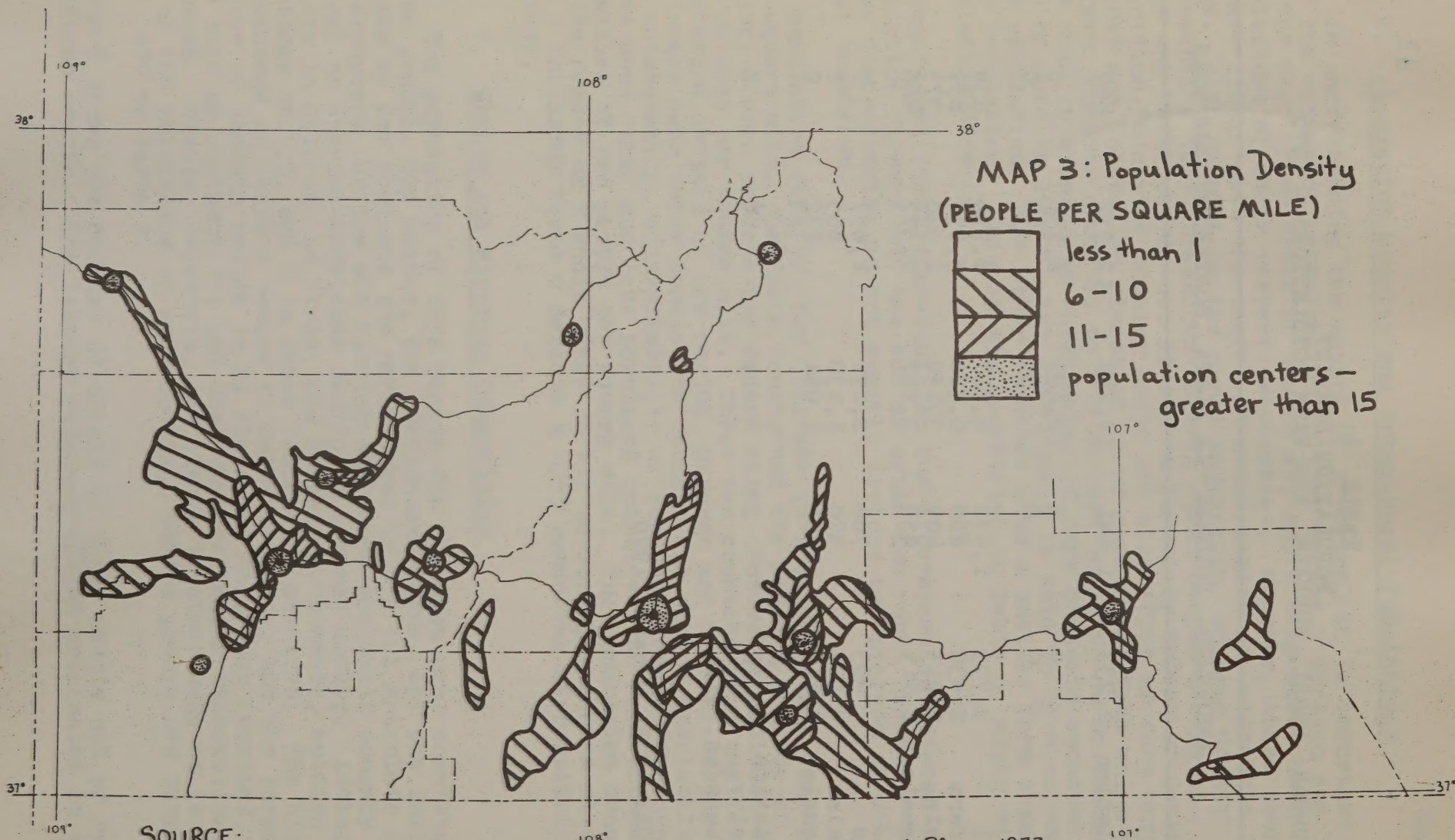


TABLE 6:  
POPULATION DENSITY,  
URBAN, RURAL, NONFARM, AND FARM POPULATIONS - 1970

	ARCHULETA	DOLORES	LA PLATA	MONTEZUMA	SAN JUAN
Total Population	2,733	1,641	19,199	12,952	849
Urban	0	0	10,682	6,158	0
%	0	0	56	48	0
Rural	2,733	1,632	8,517	6,794	839
Nonfarm	2,430	868	6,326	5,097	839
male	1,215	409	3,159	2,520	373
female	1,215	459	3,167	2,577	466
Farm	303	764	2,191	1,697	0
male	139	378	1,130	865	0
female	164	386	1,061	832	0
Population Density (persons/sq. mile)	2	2	11	6	2

SOURCE: U.S. Census, 1970.





SOURCE: San Juan Resource Conservation and Development Project Plan, 1973.



TABLE 7:  
POPULATION BY RACE, 1970

	ARCHULETA	DOLORS	LA PLATA	MONTEZUMA	SAN JUAN
Total	2,733	1,641	19,199	12,952	831
White	1,310	1,439	14,439	10,365	609
Spanish/ American	1,383	34	3,717	1,463	218
Black	15	0	27	14	0
Indian	13	155	915	1,054	0
Oriental	5	0	39	5	0
Other	7	13	62	51	1
% White	48	88	75	80	73
% Spanish	51	> 1	19	11	26
% Indian	> 1	9	5	8	> 1

SOURCE: Colorado Division of Planning, Colorado Population Trends, Volume 1, Number 3, Summer 1972.



TABLE 8:  
NATIVITY, PARENTAGE, AND COUNTRY OF ORIGIN

	ARCHULETA	DOLORES	LA PLATA	MONTEZUMA	SAN JUAN
TOTAL POPULATION	2,733	1,593	19,199	12,952	710
Native of native parentage	2,599	1,541	17,900	12,564	582
Native of foreign or mixed parentage	112	52	1,094	309	103
Foreign born	22	-	205	79	25
TOTAL FOREIGN STOCK	134	52	1,299	388	128
United Kingdom	10	4	176	61	-
Ireland	-	-	47	8	-
Sweden	-	-	68	13	9
Germany	23	16	211	71	-
Poland	8	-	16	-	5
Czechoslovakia	-	-	28	-	-
Austria	10	9	90	15	20
Hungary	-	-	14	-	-
U.S.S.R.	-	9	15	-	30
Italy	20	8	162	38	13
Canada	5	-	121	64	-
Mexico	16	-	24	16	-
Other America	-	-	-	16	-
All other and not reported	42	6	327	86	51
Persons of Spanish Language	1,365	6	3,403	1,274	162
Other Persons of Spanish Surname	18	28	314	189	56
Persons of Spanish origin or descent	1,219	227	2,528	1,246	256
Persons of Puerto Rican birth or parentage	-	-	8	-	-

SOURCE: U.S. Census, General Social and Economic Characteristics, 1970.



United Kingdom, Germany, Austria, Italy, Canada, and Mexico.

Details of the Spanish-American population appear throughout this profile in individual sections, such as those on income, housing, and social welfare and well-being. Data are given for only Archuleta, La Plata, and Montezuma Counties where the Spanish-American population is prominent.

Approximately 900 Indians reside on the Southern Ute Indian Reservation and 1,240 reside on the Ute Mountain Indian Reservation as of July, 1974.

#### G. Population Projections

The population of the San Juan Basin, in general, has been increasing since white men first came to settle in the region in the last half of the nineteenth century. Population is projected to continue this increase, barring some large-scale catastrophe or a radical decrease in birth rates.

Peaks and dips have occurred in the past. These are discussed somewhat in the history notes of the introduction. The fluctuations that have occurred seem related to the extent of mining activity in the region, providing or removing employment. For example, population dropped in La Plata County around 1960 with a decline in the oil production industry in that county. Another example is found presently around Dove Creek, where population is increasing slightly due to an invigoration of uranium mining in nearby San Miguel County.

Table 9 shows population projections by decade through the year 2000. In some instances more than one projection is given for the same area. The different sources of these projections are noted on the table. A detailed explanation of the mathematical development of these projections can be found in the referenced source of the Colorado Division of Planning.

Dolores and San Juan Counties are projected to grow the least of the five counties. This is congruent with their present low populations and low-profile economic bases. Increase in these counties could be particularly attributed to in-migration by people coming from more densely populated areas and seeking more open space in their habitat.

La Plata and Montezuma Counties are projected to about double their populations by 2000. These projections must assume that the counties can retain the present levels of economic activity as well as attract more. It is easiest for these two counties to attract new industry which would provide the new jobs necessary to support this projected population growth. The Durango and Cortez areas have the infrastructure mechanisms already operating which industry seeks in a new location. Illustrating this with an example from the past, when Empire Electric decided to locate in Southwestern Colorado, it looked at both Cortez and Dove Creek. Cortez was decided upon because Dove Creek lacked housing and



TABLE 9:  
POPULATION PROJECTIONS

	1970	1980	1990	2000
ARCHULETA	2,733	5,000 1,655*	6,500	7,500
Pagosa Springs	1,360	2,500	3,000	3,500
DOLORES	1,641	1,550 1,374*	1,890	2,666
Dove Creek	619	600	600	600
Rico	275	375	475	750
LA PLATA	19,199	30,000 24,159*	35,000	40,000
Bayfield	320	450	500	550
Durango	10,333	15,679	25,639	41,400
Ignacio	613	1,500	3,000	6,000
MONTEZUMA	12,952	16,770 15,064*	22,000	30,000
Cortez	6,032	12,500	15,500	18,700
Dolores	820	875	910	1,000
Mancos	709	1,015	1,100	2,000
SAN JUAN	831	900** 903*	1,000**	1,000**
Silverton	797	800**	900**	900**

1980, 1990, and 2000 data without asterisks are from projections of County and City officials.

\* prepared by Division of Business Research, University of Colorado, 1973.

\*\* estimates of the Colorado Division of Planning since local estimates were not always provided.

SOURCES: Colorado Division of Planning, Demographic Section, February, 1971.

1970 data are from U.S. Census.



related public services necessary to the incoming Empire Electric employees.

Archuleta County is projected to more than double its population by 2000. This projected growth, at least in part, must be attributed to the new housing development by Eaton International outside Pagosa Springs. It is not yet known if this development will be occupied mainly by retired people originally from outside the region and having incomes independent of the local economic base. If this is not the case, Archuleta County may have a difficult time attracting enough new employment opportunities to support this great of a population increase in the next twenty-five years.



All quotes in this section are taken from the 1973 and 1974 Current Inventory and Needs of the Division of Housing, Colorado Department of Local Affairs.

A. Housing Starts and Current Inventory

The Division of Housing of the Colorado Department of Local Affairs has developed estimates of current housing inventory by incorporating recent housing starts and housing deletions into the foundation of 1970 Census data. Housing starts in Colorado increased dramatically from 1966 to 1972:

1966	=	13,030
1967	=	17,404
1968	=	22,212
1969	=	24,276
1970	=	33,111
1971	=	55,042
1972	=	70,681

In 1973 however, this trend changed as housing starts dropped back to 49,265. Housing starts data include housing units intended for both year-round and seasonal occupancy. About 98 percent of all residential construction activity from 1969 to 1972 "occurred in jurisdictions containing 90 percent of the state's population and comprising about 50 percent of the land area." These jurisdictions do not include the San Juan Basin. Table 10 gives 1969-1973 estimated housing starts for Region #9. Archuleta County had an upsurge of housing starts in 1972 which is still continuing. Some portion of this is attributable to the development of Pagosa, a 26,000 acre master-planned community, by Eaton International Corporation, with 1,238 housing units planned for construction by 1980. In Dolores County, five housing units were constructed in 1971. La Plata County, the most populated county of the region, had 908 housing starts between 1969 and 1973. Over half of these occurred during 1973. Montezuma County had 120 housing starts in the 1969-1973 period, half of which occurred in 1972. In San Juan County, two housing units were constructed in the same time period.

"Units are lost from the housing inventory primarily through demolition. Demolitions result principally from private redevelopment activities, and from public code enforcement programs, urban renewal, highway construction and similar activities. Other housing inventory losses occur through conversion to non-residential use, merger, deterioration, abandonment, and destruction by fire, flood or natural disaster. Generally speaking, it is believed that the majority of housing units removed through demolition were occupied by households eligible, by income, for federally-subsidized housing programs. To the extent this was in fact the case, these estimates reflect the net loss in the number of low-income housing units available to Colorado households." From April, 1970 to April, 1973, deletions in Colorado amounted to 9,000 units, 3,000 of which were owner-occupied units and 6,000 of which were rental units. During this same period, 45 units were deleted in the San Juan Basin, 15 of which were rental units. Deletions by county were as follows:



TABLE 10: ESTIMATED HOUSING STARTS: 1969-1973

	1969	1970	1971	1972	1973*
ARCHULETA	2	2	5	22	78
DOLORS	-	-	5	-	-
LA PLATA	38	176	42	172	480
MONTEZUMA	6	2	14	63	35
SAN JUAN	1	-	-	1	-
REGION # 9	47	180	66	258	593
COLORADO	24,276	33,111	55,042	70,681	49,265

\*preliminary

SOURCES: Division of Housing Estimates based on information obtained from the Demographic Section of the State Division of Planning; U.S. Bureau of the Census, Construction Reports, C 40 Series; McGraw-Hill Publication, the Daily Journal; Home Builders Association of Metropolitan Denver publication, the Metropolitan Denver Home Builder; Region VIII office of the U.S. Department of Housing and Urban Development; State Office of the Farmers Home Administration; and numerous local building departments, and local municipal and county officials.



Archuleta	= 5
Dolores	= 5
La Plata	= 20
Montezuma	= 10
San Juan	= 5

#### B. Year-Round Units

Besides the above differentiation between owner-occupied units and rental units, housing can be either year-round or seasonal units. "As of April 1, 1973, it is estimated that there were some 897,521 year-round units in Colorado. This figure represents a net increase of nearly 156,000 units, or 21 percent, over the 741,650 year-round housing units enumerated by the United States Bureau of the Census on April 1, 1970. The increase already amounts to about 90 percent of the 171,651 year-round housing units started in the state during the ten-year period, 1960 to 1970. About 58 percent (90,963 units) of the net additions since 1970 are estimated to have been units occupied by owners. The remaining 64,908 units were rental units." By April, 1974 the estimated number of year-round housing units in Colorado rose to 955,850. 14,935 of these year-round units are located in the San Juan Basin, 10,668 owner-occupied units and 4,267 rental units. The Table 11 series is a chart produced for each county, Region # 9 and Colorado. On it is shown the total number of year-round housing units for 1970, 1973, and 1974. Table 13 compares the 1970 total number of year-round housing units with the number of those with a household head of Spanish language or surname.

#### C. Seasonal Units

An estimated 10,000 seasonal units were constructed in Colorado between 1970 and 1974. About 90 percent of this seasonal unit construction occurred in mountain resort areas of the State. "In so far as seasonal units are not generally available, by virtue of high sales and rental prices, to year-round residents of the area in which they are constructed, these units are tabulated separately in this [Division of Housing] report." About 1,000 seasonal housing units existed in the San Juan Basin as of the 1970 Census. The Table 11 series contains 1970 census figures on total number of housing units, combining year-round and seasonal units. Over half of Region #9's seasonal units were located in La Plata County. No county estimates on seasonal units were found for the years since 1970.

#### D. Mobile Homes

"Over the inventory period, the mobile home has continued to become an evermore popular means of shelter in Colorado... The Division of Housing estimates that there are some 63,930 mobile homes in Colorado on April 1, 1974. These mobile home units comprised more than six percent of the total year-round housing supply. Indications are that approximately one out of



every six of the new housing units becoming available in Colorado between 1970 and 1974 has been a mobile home. In most rural areas of the state, 50 to 75 percent of all new housing in the past four years has been mobile homes. In total, it is estimated that 34,385 new mobile homes have been added to the state's housing supply since 1970. By comparison, census data indicate that some 16,566 mobile homes, comprising about ten percent of all net housing unit additions, became the homes of Colorado households between 1960 and 1970. Of the 14,935 year-round housing units in the San Juan Basin, 2,560 are mobile homes. About one-quarter of total year-round housing in Montezuma County is mobile homes, straying from the 'one-sixth' generalization above by the Division of Housing. The other counties fall close to the one-sixth mark.

The Table 11 series shows how many of the mobile homes were either owner-occupied units and rental units in 1970, 1973, and 1974.

#### E. Vacancy

"At any point in time, there are new households forming, households in-migrating to the area, and households attempting to upgrade their living accommodations by moving to 'more desirable' units. To satisfy these needs, a portion of the housing inventory must be vacant and readily available for occupancy at all times. The number and ratio of vacant units available for sale or rent are, therefore important measures of the adequacy of the housing supply in terms of quantity...Current reliable, uniform vacancy data are not presently available for Colorado and its political subdivisions. Detailed vacancy information from the 1970 Census are now four years out-of-date and, therefore, no longer reflect present housing supply and demand situations in many areas of the state...The reader is urged to use caution in attempting to estimate overall effective vacancy rates on the basis of households data and year-round housing inventory data. Adjustments to eliminate from consideration those units which are substandard or held off the market are necessary prior to computation of effective vacancy rates."

#### F. Availability Imbalances

"Despite record-breaking levels of residential construction since 1969, indications are that overall housing supply and demand are generally in balance statewide. Imbalances are known to exist, however, with respect to particular sizes, types, and prices in some jurisdictions. In rural areas and resort communities, for example, the number of standard vacant units available is believed to be 20 percent below desirable vacancy levels. Severe shortages of low-to-moderate price rental and sales units in both metropolitan and non-metropolitan areas, and shortages of housing available to agricultural workers are believed to be common."



## G. Government Assistance

"As of April 1, 1973, an estimated 25,503 federally-subsidized housing units were under either management or development in the State of Colorado. (Included in these figures are those units in projects for which preliminary funding commitments have been issued by the Farmers Home Administration and the U.S. Department of Housing and Urban Development. It is not necessarily true that all units with tentative approval will eventually receive final approval and be constructed as proposed.) Nearly one-fourth of these units (an estimated 5,837 units) were units intended for occupancy by the elderly.

In order to be eligible for admission to any of these assisted units, household income and assets must not exceed specified limitations. Admission limits vary according to family size. Units designated as 'low-price' units include all public housing units and those privately-owned housing units designated to receive a rent supplement from the Federal Housing Administration. 'Low-price' units are intended for Colorado families and other households with annual incomes in the \$1,000 to \$7,000 range. Those units herein specified as 'moderate-price' units include those units receiving a mortgage interest subsidy under Federal Housing Administration and Farmers Home Administration rental and sales programs. 'Moderate-price' units are intended for occupancy by Colorado families and other households with annual incomes in the \$4,000 to \$9,000 range.

The Division estimates that there are some 7,352 low-rent public housing units presently under either management or development in Colorado. (Public Housing data presented herein do not include 580 units for which preliminary approval was issued by the U.S. Department of Housing and Urban Development in September, 1972. Approval was subsequently withdrawn in January 1973, and had not been reinstated as of April 1, 1973.) About two-thirds of these units are located in the City and County of Denver and nearly three-fourths in either Denver or Pueblo. With the exception of 55 units developed in La Plata County by the Southern Ute Housing Authority, there are no public housing units under management or development in 'Western Slope' Districts 9, 10, 11, and 12. Low-rent public housing units can only be developed and managed by local housing authorities...

In addition to low-rent public housing units, the Division estimates there are some 11,107 low- and moderate-price rental units under management or development in Colorado as well as 7,044 sales units for which federal funds have been obligated. Nearly 90 percent of all federally-assisted sales units in Colorado have been sold under the Federal Housing Administrations's 'Section 235i' Program."

The number of government-assisted housing units in Region #9 is the third lowest of any planning region in Colorado. As of April 1, 1974, the State as a whole had a total of 25,822 low- and moderate-price subsidy units. Region #9's portion of this is



232 units, about 0.9% of the State total. (The region holds 1.7% of the state's population). Of these 232 units, 59 can be found in Archuleta County, 166 in La Plata County (55 of which are on the Southern Ute Indian Reservation), and 7 in Montezuma County. None are located in Dolores or San Juan Counties. Refer to the Current Inventory and Needs for the breakdown of these units into low-rent public housing, rent supplements, and FHA moderate-price mortgage interest subsidies.

#### H. Household Income

"Effective demand is determined not only by current and projected needs in terms of numbers of households, but also by the ability of potential purchasers and renters to pay in terms of their incomes. Household incomes data...are intended as indicators of effective demand for housing in general, and rental housing in particular." The Table 11 series shows household income by percentile group (for the year April, 1973 to April, 1974) as well as the number of households in 1970, 1973, and 1974 with projections to 1978 and 1980.

Ten percent (82,800) of all Colorado households received an estimated gross income which did not exceed \$2,470 during the 1973-1974 year. "For the most part, these were small elderly households living primarily upon retirement incomes. Assuming that not more than 25 percent of total income should be expended for housing accommodations, households in this income category should not spend more than \$52 a month for housing purposes. It must be pointed out immediately, however, that a significant number of these modest- and low-income households presently own or rent decent dwelling units. This being the case, these households would not constitute part of an effective or 'cash-in-hand' demand." Within the region, the gross incomes of 1,220 households (ten percent) did not exceed \$1,790, a \$30 drop from the previous year. For San Juan County, this household income figure was particularly high, \$4,860.

The gross income received by half of Colorado's 828,000 households between April, 1973 and April, 1974 was estimated at or below \$10,690. This median household income in the San Juan Basin was \$8,410 for the same time period, rising \$340 over the previous year. In San Juan County this median income figure was \$10,730.

#### I. Family Incomes

As numbers of households and their incomes are particularly indicative of effective demand for rental housing, numbers of families and their incomes can be considered indicative of effective demand for sales housing. The Table 11 series shows family income by percentile group (for the year April, 1973 to April, 1974) as well as the number of families in 1970, 1973, and 1974 with projections to 1978 and 1980. 65,340 Colorado families (ten percent) received gross incomes which did not exceed \$4,580 in the year April, 1973 to April, 1974. Twenty percent, 130,680



families, received gross incomes at or below \$5270. As far as the counties are concerned, ten percent of the families of La Plata County received gross annual incomes which did not exceed \$3400, the lowest county figure. It is noteworthy that this family gross annual income figure in San Juan County reached \$8200. These county figures are down about \$45 from the previous year, except in San Juan County where a \$90 drop was Experienced.

Half of the 326,700 families in Colorado received an estimated gross income of \$12,330 between April, 1973 and April, 1974. "This figure, however, is not representative of incomes in most geographic areas of the state. Rather, this figure is heavily weighed by the relatively large populations and high incomes in the 'Front Range' Districts. Not only do wages and salaries tend to be higher in these areas, but it is also more common for the wife or another member of the family to be receiving an income from employment outside of the home." When looking at the San Juan Basin, these median family annual income figures for the same time period become \$9620 for half of the 10,030 families. Median family incomes for the counties themselves averaged \$9550 except for San Juan County with \$11,560. These county figures are up roughly \$400 from the previous year.

#### J. Projected Housing Requirements

When projecting future housing needs, four "separate and distinct sources of need" must be considered:

- 1) Household formation and in-migration.
- 2) Current and future vacancy needs.
- 3) Replacement of occupied standard housing unit losses.
- 4) Replacement of occupied substandard housing units.

In the San Juan Basin, the most critical of these needs are the first and the last, household formation and in-migration along with replacement of occupied substandard housing units.

#### Housing Formation and In-Migration:

"Projections of household growth represent the first element in the determination of future housing requirements. Clearly, increases in the number of households are closely related to increases in population resulting from natural increase (the excess of births over deaths) and net in-migration (the excess of persons moving into an area to live over those leaving the area to live elsewhere.) Household growth projections must also consider anticipated household size and rates of household formation."

\* "Given these latter considerations, it is possible for household increases to take place even in those cases in which population is stable or declining. Comparison of 1960 and 1970 Census data indicate, for example, that ten of those 32 Colorado counties that experienced population declines during the 1960's actually reported increased #'s of households during the decade."



The Current Inventory and Needs for 1973 gives projections for the five-year period 1974-1978. The 1974 Current Inventory and Needs gives projections for 1975-1980. These two housing projections are based on different population projections as noted in the sources for the Table 11 series, accounting for the noticeable incongruity between the housing projections for 1978 and 1980. "It should be noted that all populations, households, and families projections presented herein are based primarily on recent historical trends data and, therefore are not to be treated as precise or inevitable. Future changes in economic conditions, fertility rates, household sizes, and other factors may cause actual numbers of persons, households, and families to differ substantially from those projected."

"Due to the increased relative significance of mobile homes, and apartment and townhouse condominiums in the housing inventory, owner units are expected to account for a slightly greater proportion of overall new construction during the next five years than in the preceding three-year period."

#### Current and Future Vacancy Needs:

"In projecting vacancy needs, two components must be considered: (1) those requirements which will result from future household formation and in-migration; and (2) current surpluses or deficits of standard, vacant, and available units for which allowances must be made in the future.

The first of the two vacancy requirements components is clearly a function of anticipated household growth requirements. In other words, for a specified number of sales (or rental) units constructed to accomodate new households which have formed or in-migrated to an area, a new sales (or rental) unit must be constructed to maintain the reservoir of vacant and available sales (or rental) units at a recommended level...In areas of Colorado in which population growth is expected to be modest, effective vacancy rates of 1.0 percent and 4.0 percent for owners and renters, respectively, are considered adequate.

Accurate estimation of the second vacancy requirements component is contingent upon the availability of current vacancy data for the housing market area under consideration." As was noted in the earlier discussion of vacancy, the most recent uniform and detailed vacancy information from the 1970 Census is already out-of-date and unreflective of present needs. However, "Division of Housing experiences in rural areas and in resort communities in the state indicate that at least modest shortages of year-round sales and rental units may exist in some of these areas. In general, the number of standard vacant units available in rural and resort areas is believed to be about 20 percent below those vacancy levels considered desirable."

#### Replacement of Occupied Standard Housing Unit Losses:

The Housing Starts section (/2.2-A/) discusses how housing



TABLE 11a:  
 SELECTED DATA ON HOUSEHOLDS\*, FAMILIES\*\*, AND HOUSING UNITS  
 ARCHULETA COUNTY

PERCENTILE GROUP***	ESTIMATED HOUSEHOLD INCOME APRIL 1973- APRIL 1974		ESTIMATED FAMILY INCOME APRIL 1973- APRIL 1974	
10	\$ 2,260		\$ 4,300	
20	4,110		5,380	
30	5,240		6,380	
40	6,650		8,360	
50	8,570		9,410	
60	10,340		10,210	
70	12,080		12,560	
80	15,020		14,530	
90	18,620		18,680	

	1970	1973	1974	Projected 1978 1980	
# of Households	817	720	700	730	510
# of Families	673	590	580	600	420
# of year-round					
Housing units	1,188	1,182	1,287	1,342	1,242
Owner	822	822	871	926	867
Rental	366	360	416	416	375
Mobile Homes	144	121	170		
Owner	122	102	144		
Rental	22	19	26		
Total # of Housing Units (including Seasonal)	1,211				



TABLE 11b:

SELECTED DATA ON HOUSEHOLDS\*, FAMILIES\*\*, AND HOUSING UNITS  
DOLORES COUNTY

PERCENTILE GROUP***	ESTIMATED HOUSEHOLD INCOME APRIL 1973- APRIL 1974			ESTIMATED FAMILY INCOME APRIL 1973- APRIL 1974	
10	\$ 1,780			\$ 4,310	
20	3,650			6,060	
30	5,310			7,810	
40	7,020			8,760	
50	8,660			9,790	
60	10,370			11,280	
70	12,090			13,120	
80	15,870			15,790	
90	23,060			24,470	

	1970	1973	1974	Projected 1978 1980	
# of Households	500	490	480	500	430
# of Families	418	410	400	420	360
# of year-round Housing units	644	668	701	766	736
Owner	462	481	509	544	521
Rental	182	187	192	222	215
Mobile Homes	53	77	110		
Owner	45	65	93		
Rental	8	12	17		
Total # of Housing Units (including Seasonal)	742				



TABLE 11c :  
 SELECTED DATA ON HOUSEHOLDS\*, FAMILIES\*\*, AND HOUSING UNITS  
 LA PLATA COUNTY

PERCENTILE GROUP***	ESTIMATED HOUSEHOLD INCOME APRIL 1973- APRIL 1974		ESTIMATED FAMILY INCOME APRIL 1973- APRIL 1974	
10	\$ 1,700		\$ 3,400	
20	3,270		5,200	
30	4,920		6,860	
40	6,770		8,350	
50	8,370		9,700	
60	10,200		11,220	
70	12,130		13,320	
80	15,350		15,950	
90	19,340		22,500	

	1970	1973	1974	Projected	
				1978	1980
# of Households	5,683	6,070	6,420	6,620	7,350
# of Families	4,632	4,950	5,230	5,400	5,990
# of year-round Housing Units	6,345	7,234	7,637	8,204	8,977
Owner	4,520	5,157	5,400	5,809	6,285
Rental	1,825	2,077	2,237	2,395	2,692
Mobile Homes	514	1,140	1,380		
Owner	437	969	1,173		
Rental	77	171	207		
Total # of Housing Units (including Seasonal)	6,989				



TABLE 11d:

SELECTED DATA ON HOUSEHOLDS\*, FAMILIES\*\*, AND HOUSING UNITS  
MONTEZUMA COUNTY

PERCENTILE GROUP***	ESTIMATED HOUSEHOLD INCOME APRIL 1973- APRIL 1974		ESTIMATED FAMILY INCOME APRIL 1973- APRIL 1974	
10	\$ 1,790		\$ 3,480	
20	3,350		5,030	
30	4,830		6,380	
40	6,560		7,870	
50	8,150		9,300	
60	9,840		10,800	
70	11,610		12,430	
80	14,190		14,800	
90	18,040		18,630	

	1970	1973	1974	Projected 1978 1980	
# of Households	3,695	4,250	4,320	4,350	4,730
# of Families	3,303	3,540	3,600	3,620	3,940
# of year-round Housing Units	4,402	4,880	4,994	5,340	5,759
Owner	3,187	3,592	3,683	3,910	4,258
Rental	1,215	1,288	1,311	1,430	1,501
Mobile Homes	357	785	850		
Owner	303	667	722		
Rental	54	118	128		
Total # of Housing Units (including Seasonal)	4,480				



TABLE 11e:

SELECTED DATA ON HOUSEHOLDS, FAMILIES, AND HOUSING UNITS  
SAN JUAN COUNTY

PERCENTILE GROUP***	ESTIMATED HOUSEHOLD INCOME APRIL 1973- APRIL 1974		ESTIMATED FAMILY INCOME APRIL 1973- APRIL 1974	
10	\$ 4,860		\$ 8,200	
20	7,370		9,190	
30	9,030		9,810	
40	9,880		10,730	
50	10,730		11,560	
60	11,590		12,280	
70	12,440		13,740	
80	14,960		16,230	
90	18 220		18,800	

	1970	1973	1974	Projected 1978 1980	
# of Households	262	220	280	230	290
# of Families	205	170	220	180	230
# of year-round Housing Units	292	315	316	342	341
Owner	182	205	205	218	217
Rental	110	110	111	124	124
Mobile Homes	22	49	50		
Owner	19	42	43		
Rental	3	7	7		
Total # of Housing Units (including Seasonal)	375				



TABLE 11f:

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## SELECTED DATA ON HOUSEHOLDS\*, FAMILIES\*\*AND HOUSING UNITS

REGION #9

PERCENTILE GROUP***	ESTIMATED # OF HOUSEHOLDS	ESTIMATED HOUSEHOLD INCOME APRIL 1973- APRIL 1974	ESTIMATED # OF FAMILIES	ESTIMATED FAMILY INCOME APRIL 1973- APRIL 1974
10	1,220	\$ 1,790	1,003	\$ 3,550
20	2,440	3,430	2,006	5,270
30	3,660	5,020	3,009	6,770
40	4,880	6,780	4,012	8,290
50	6,100	8,410	5,015	9,620
60	7,320	10,160	6,018	11,060
70	8,540	11,950	7,021	12,940
80	9,760	14,930	8,024	15,280
90	10,980	18,740	9,027	20,720
100	12,200		10,030	

	1970	1973	1974	Projected 1978	Projected 1980
# of Households	11,227	11,750	12,200	12,430	13,310
# Of Families	9,231	9,020	10,030	10,220	10,940
# of year-round Housing Units	12,871	14,279	14,935	15,994	17,055
Owner	9,173	10,257	10,668	11,407	12,148
Rental	3,698	4,022	4,267	4,587	4,907
Mobile Homes	1,090	2,172	2,560		
Owner	926	1,845	2,175		
Rental	164	327	385		
Total # of Housing Units (including Seasonal)	13,797				



TABLE 11g:

## SELECTED DATA ON HOUSEHOLDS\*, FAMILIES\*\*, AND HOUSING UNITS

## COLORADO

PERCENTILE GROUP***	ESTIMATED # OF HOUSEHOLDS	ESTIMATED HOUSEHOLD INCOME APRIL 1973 APRIL 1974	ESTIMATED # OF FAMILIES	ESTIMATED FAMILY INCOME APRIL 1973- APRIL 1974
10	82,800	\$ 2,470	65,340	\$ 4,580
20	165,600	4,700	130,680	6,980
30	248,400	6,660	196,020	8,740
40	331,200	8,700	261,360	10,540
50	414,000	10,690	326,700	12,330
60	496,800	12,660	392,040	14,260
70	579,600	15,390	457,380	16,530
80	662,400	18,230	522,720	19,270
90	745,200	25,610	588.060	27,490
100	828,000		653,400	

	1970	1973	1974	1978	1980
# of Households	690,928	795,000	828,000	960,000	1,047,400
# of Families	545,417	629,600	653,400	756,400	826,800
# of year-round Housing Units	741,650	897,521	955,850	1,105,021	1,212,500
Owner	470,972	561,935	595,722	675,535	739,327
Rental	270,678	335,586	360,128	429,486	473,173
Mobile Homes	29,545	55,700	63,930		
Owner	25,150	47,679	54,721		
Rental	4,395	8,021	9,209		



## FOOTNOTES TO TABLE II :

\* A household consists of all the persons who occupy a housing unit. A household may be a single family, one person living alone, two or more families living together, or any other group of related or unrelated persons who occupy a housing unit.

\*\* A family consists of a household head and one or more other persons living in the same household who are related to the head by blood, marriage, or adoption. Not all households contain families because a household may be composed of a group of unrelated persons or one person living alone.

\*\*\* Income figures reflect upper limits of percentile groups: for example, it is estimated that 50% of all Archuleta households received annual gross incomes at or below \$8570 during the period from April 1, 1973 to April 1, 1974.

## SOURCES:

1970 data are from U.S. Bureau of the Census, Census of Population: 1970.

1973 and 1978 data are Division of Housing estimates based on 1973 preliminary population estimates and 1978 preliminary population projections by the Demographic Section of the State Division of Planning.

1974 and 1980 data are Division of Housing estimates interpolated from population estimates developed by the Division of Business Research of the University of Colorado in cooperation with the Colorado Division of Planning and published in Colorado County Population Estimates - 1970 to 1980: Methods and Results.

Mobile Home estimates were developed by the Division of Housing on the basis of monthly mobile home registrations summaries published by the State Motor Vehicle Division and information reported by local municipal and county officials.



units are lost, mostly through intentional demolition. "No accurate record of such losses from the housing stock exists in the State. Although the Demographic Section of the State Division of Planning does maintain annual records of demolition activities, these files are in many cases inadequate due to incomplete and inaccurate responses from local municipal and county building departments. Furthermore, records relating to the physical condition of housing inventory losses are totally lacking."

#### Replacement of Occupied Substandard Housing Units:

"The term 'substandard' is not an official Census Bureau classification. Rather, it is a term which has been generally adopted by housing agencies to include those housing units which are: (1) structurally dilapidated, or (2) lacking some or all plumbing facilities. ('Lacking some or all plumbing facilities' means that at least one of the following is not present: hot and cold piped water inside the structure, and a flush toilet and bathtub or shower inside the structure for the exclusive use of the occupants of the unit.)

In the 1960 Census, information on structural condition and presence of complete plumbing facilities was collected. While the data on structural condition was, by the Census Bureau's own admission, in many cases unreliable and inaccurate, it could be used in combination with plumbing data to provide some indication of the adequacy of the housing supply in terms of quality. Structural condition data were not collected in the 1970 Census." Table 12 compares the number of housing units with all plumbing facilities with total number of year-round housing units for 1970. Table 13 includes this comparison for housing units occupied with household head of Spanish language or Spanish surname. Table 14 gives data on what year housing units were built through March of 1970, both for all housing units and those units occupied by Spanish-Americans. It is interesting that only 28 of the total 310 housing units in San Juan County have been built since 1940.

"The Division estimates that in 1970 nearly 28,000 occupied year-round housing units were structurally dilapidated or lacking complete plumbing facilities. It is also estimated that approximately 3,000 occupied substandard units have been removed from the housing supply since 1970 as a result of intentional demolition, and destruction by fire, flood, or other natural disaster. On the other hand, an undetermined number of standard units have become substandard in the past three years as a result of deterioration and abuse. As of April 1, 1973, the Division of Housing estimates that there were approximately 25,000 substandard housing units in Colorado which were still occupied. In order to realize a goal of safe and decent housing for all Colorado residents within the next five years, these substandard units should be rehabilitated or replaced with standard housing units... In the...San Juan Basin...occupied substandard units are estimated to have accounted for at least five percent of all year-round units. Statewide, about three percent of all occupied year-round



TABLE 12: PLUMBING FACILITIES, 1970

AREA	TOTAL YEAR-ROUND HOUSING UNITS	HOUSING UNITS WITH ALL PLUMBING FACILITIES
ARCHULETA	1188	958
DOLORS	644	534
LA PLATA	6,345	5,872
MONTEZUMA	4,402	3,955
SAN JUAN	292	286
REGION	12,871	11,605

SOURCE: U.S. Census, Detailed Housing Characteristics, 1970.



TABLE 13:  
1970 CHARACTERISTICS OF HOUSING UNITS WITH HOUSEHOLD HEAD  
OF SPANISH LANGUAGE OR SPANISH SURNAME

CHARACTERISTIC	ARCHULETA	LA PLATA	MONTEZUMA
Total population Spanish language or Spanish surname population	1,383	3,717	1,463
Total housing units	1,188	6,345	4,402
Total Spanish housing units	336	814	342
owner	200	445	232
renter	76	369	110
With all plumbing facilities	266	678	282

SOURCE: U.S. Census, Detailed Housing Characteristics, 1970.



TABLE 14:  
DATA ON YEAR STRUCTURE BUILT - 1970

YEAR	ARCHULETA	DOLOROS	LA PLATA	MONTEZUMA	SAN JUAN
1969 to March 1970	44	-	162	102	12
1965 - 1968	144	14	496	327	5
1960 - 1964	158	67	720	324	6
1950 - 1959	210	238	1,652	1,565	5
1940 - 1949	131	214	801	800	-
1939 or earlier	504	115	2,567	1,307	282

For Structures with Household Head of Spanish  
Language or Spanish Surname

1965 to March 1970	44	53	35
1960 - 1964	39	44	43
1950 - 1959	66	182	100
1940 - 1949	58	80	89
1939 or earlier	129	455	75

SOURCE: U.S. Census, Detailed Housing Characteristics, 1970.



units are estimated to have been substandard on April 1, 1973." In the La Plata County Preliminary Comprehensive Plan, 1971, There is mention of a Housing Study for La Plata County, Durango, Ignacio, and Bayfield which includes estimations of deteriorating and dilapidated housing units. This study should be available through the Animas Regional Planning Commission in Durango.

Summary: The Table II Series shows total year-round housing requirements as projected for 1978 and 1980, dividing these totals into numbers of owner-occupied and rental units. In the San Juan Basin more than one-half of projected total requirements are attributable to the need to replace occupied substandard units. "A large portion of the requirements...is for housing developed or subsidized to meet the needs of low-income households, and particularly elderly households. It is believed that a majority of standard units lost through demolition...and virtually all of the occupied substandard units which must be replaced...are currently occupied by low- and moderate-income households. If these households are to be expected to relocate from their present housing, whether it be standard or substandard, there must be available alternative standard housing which they can afford. In addition, it is estimated that about ten percent of those...households expected to form or in-migrate each year are unable to afford available standard housing...It is obvious these potential requirements are very great in view of the quantities of subsidized housing currently available, and current and anticipated housing costs to both builders and residents." It should be pointed out that Fort Lewis College students around Durango are frequently a part of the low- to moderate-income group discussed above.

#### K. Financial Characteristics

Table 15 shows the value of owner-occupied housing units by county in 1970 for all year-round housing units and then for those units occupied by Spanish-Americans. 'Value' here is defined by the Census Bureau as the census respondent's estimate of how much the property would sell for if it were for sale. Only one-family houses on less than 10 acres (and with no commercial business or medical practice on the property) were considered in this table. Owner-occupied units in Dolores and San Juan counties had the lowest median values. Median values for units occupied by Spanish-Americans fell \$1,000 to \$4,000 below the total median values in the same counties.

Table 16 shows contract rent values by county in 1970. Both total rental units and units rented by Spanish-Americans are included. One-family homes on ten acres or more are excluded from the table. Contract rent is defined by the Census Bureau as monthly rent agreed to, irregardless of the degree of utilities, furnishings, or other services which are included in the rent. Median rent was lowest in Dolores County and highest in Archuleta County. Median rent of Spanish-Americans fell \$11 to \$14 below the total median rents of the same counties.



TABLE 15:  
VALUE OF SPECIFIED OWNER OCCUPIED UNITS - 1970

VALUE	ARCHULETA	DOLORES	LA PLATA	MONTEZUMA	SAN JUAN
Specified owner occupied*	283	156	2,704	1,747	120
less than \$5,000	48	50	129	217	20
\$5,000-\$9,999	120	74	416	545	68
\$10,000-\$14,999	51	14	783	515	26
\$15,000-\$19,999	26	6	662	284	6
\$20,000-\$24,999	38	12	329	84	-
\$25,000-\$34,999	-	-	227	66	-
\$35,000 or more	-	-	113	36	-
Median	\$8,800	\$6,200	\$14,800	\$11,000	\$7,200

For Units with Household Head  
of Spanish Language or Spanish Surname

Specified owner occupied*	161	301	115
less than \$5,000	37	45	31
\$5,000-\$9,999	82	91	35
\$10,000-\$14,999	36	119	29
\$15,000-\$19,999	-	31	20
\$20,000-\$24,999	6	7	-
\$25,000-\$34,999	-	-	-
\$35,000 or more	-	8	-
Median	\$6,900	\$10,600	\$8,900

SOURCE: U.S. Census, Detailed Housing Characteristics, 1970.

\*limited to one-family homes on less than 10 acres and no business on property



TABLE 16:  
RENT VALUES - 1970

VALUE	ARCHULETA	DOLORES	LA PLATA	MONTEZUMA	SAN JUAN
Specified renter occupied*	163	120	1,493	802	104
less than \$30	12	-	46	11	8
\$30-\$39	-	13	39	39	14
\$40-\$59	5	26	310	174	25
\$60-\$79	65	21	344	238	41
\$80-\$99	36	-	265	163	5
\$100-\$149	26	6	271	60	11
\$150 or more	-	-	44	6	-
no cash rent	19	54	174	111	-
Median	\$77	\$53	\$75	\$72	\$63

For Units with Household Head  
of Spanish Language or Spanish Surname

Specified renter occupied*	55	361	96
less than \$30	15	15	-
\$30-\$39	-	18	9
\$40-\$59	7	126	37
\$60-\$79	33	124	20
\$80-\$99	-	59	16
\$100-\$149	-	13	-
\$150 or more	-	-	-
no cash rent	-	6	14
Median	\$63	\$64	\$58

\* excludes one-family homes on 10 acres or more

SOURCE: U.S. Census, Detailed Housing Characteristics, 1970.



## /2.3/ INCOME

A. Personal Income

Personal income can be defined as that amount of money which individuals have before they pay taxes. Personal income includes earnings, property income, and transfer payments (such as old age pensions, unemployment relief, and social security). Table 17 estimates total personal income of all individuals in each county, Region #9, and Colorado, and the eleven western states for 1970 and 1972. The only change occurring between these two years was a \$1 million drop in Archuleta County. The total personal income of the region as a whole in 1970 was about \$87 million, and 1.2 percent of Colorado's total income. The percent of state figure is a measure of the importance of the local economy to the total state economy. La Plata County is the most important of the five counties in this regard.

Per capita personal income (shown for 1960 and 1970 in Table 18) is the amount of money which each individual supposedly has before paying taxes. Percentage changes from 1960 to 1970 are given in the table also. These percentage changes were calculated in current dollars, meaning that no adjustment has been made for inflation. The percentages are, therefore, most useful in comparison as opposed to standing alone. When comparing the counties, San Juan had the greatest percentage change in that decade, while La Plata and Montezuma had the least percentage changes. 'Relation to state' compares local income to the state average income and can be thought of as a standard of living index. This percentage is highest for San Juan County. Per capita personal income in Region #9 did not increase as much as that of Colorado during the 1960-1970 decade.

B. Disposable Income

Disposable income can be defined as personal income minus taxes paid. This is the amount of money with which individuals make consuming and savings decisions. Table 19 shows 1960, 1970, and 1971 disposable income for Region #9 and Colorado. No county estimates could be found. (Although, these may be calculated from personal income figures if total amount paid in taxes can be determined.) Table 17 and 18 are taken from census data. Table 19 has a different source, Sales Management Magazine. Disposable income should be less than or equal to personal income by definition. This is not the case here, however, due to the use of separate data sources. Sales Management Magazine gives a regional disposable income of \$90.5 million in 1970, whereas census data indicates a regional personal income of \$87 million for the same year. Figures for Colorado differ similarly. It should also be noted that disposable income is given per household as opposed to per capita for personal income in the previous table. These are not directly comparable. None the less, Table 19 does point out that the gap between state and regional per household disposable income is widening. Income in the San Juan Basin is not increasing as rapidly as in the state taken as a whole.



TABLE 17:  
PERSONAL INCOME

	1970 (\$ mill.)	% of state	1972 (\$ mill.)
Archuleta	6	> .1	5
Dolores	4	> .1	4
La Plata	47	.6	47
Montezuma	28	.4	28
San Juan	2	> .1	2
Region #9	87	1.2	86
Colorado	6,883		
11 Western States	114,429		

SOURCE: BLM Social-Economic Data System, 1970., 1972 Local Government Financial Compendium, Colorado Dept. of Local Affairs.

TABLE 18:  
PER CAPITA PERSONAL INCOME

	1960	1970	% change	Relation to state
Archuleta	\$1,141	\$2,195	92	.70
Dolores	1,366	2,531	85	.81
La Plata	1,664	2,448	47	.79
Montezuma	1,497	2,187	46	.70
San Juan	1,178	3,006	155	.96
Region #9	1,542	2,329	51	.75
Colorado	1,885	3,118	65	
11 Western States	2,120	3,392	60	

SOURCE: BLM Social-Economic Data System, 1970.



TABLE 19:  
DISPOSABLE INCOME

	REGION #9	COLORADO
1960		
Total in \$ mill.	61.0	3,497
Per Household	\$ 5,700	\$ 6,600
1970		
Total in \$ mill.	90.5	6,946
Per Household	\$ 8,000	\$ 9,800
1971		
Total in \$ mill.	99.0	7,735
Per Household	\$ 8,600	\$ 10,600

SOURCE: Colorado; A Regional Approach, (p.21), 'Personal Disposable Income Estimates based upon "Effective Buying Income Estimates" from the "Survey of Buying Power, 1961, 1971, 1972," Sales Management Magazine, June 1961, June 1971, June 1972.



### C. Income Distribution

Per capita income figures are calculated as if each person received an equal share of an area's total income. Since this is unrealistic, it is necessary to investigate just how income is distributed among the population of an area. Table 20a categorizes 1970 families into fifteen income brackets. Both median and mean income are included in the table. An equal number of incomes are smaller than and an equal number are larger than the median income. Income tends to center about the mean income (average family income). For both of these, the highest dollar value was experienced in San Juan County and the lowest in Montezuma County. The mean income of families with a female head of the household falls roughly \$2,000 to \$5,000 below the mean income of all families taken together. This difference is least in Archuleta County and greatest in Dolores County. Also shown in Table 20a are median and mean incomes for unrelated individuals. For April, 1973 - April, 1974 estimates and discussion of household and family income distribution refer back to section /2.2 - H and I/.

Table 20b gives the same information as Table 20a for Spanish-Americans in particular. By comparison, it is seen that mean incomes are consistently lower for the Spanish-Americans. This discrepancy is most acute in La Plata County.

In order to begin measuring the extent of poverty, the term itself must take on some definition. "During the early 1960's, the U.S. government listed all families with a money income below \$3,000 per year as poor, all others were counted as above the poverty line... The Social Security Administration in 1964 defined, and the Federal Interagency Committee in 1969 redefined, poverty income lines for over 100 household types with different required cash needs for each. This accounts for differences in income in kind, [e.g.--growing large amounts of vegetables on one's own land or living in a house to which one holds clear title], age of household, but not yet for asset holdings and temporary income fluctuations."\* Table 21 shows 1970 census figures on the number and percentage of families considered to be below a county's poverty line, their mean family income, the amount necessary to raise the average poverty family above that poverty line (mean income deficit). 11.2 percent of all Colorado families and 13.5 percent of the families in the San Juan Basin are poor. Montezuma County has the largest percentage (14.7 percent) of families under poverty level. Dolores County has the lowest mean family income (\$1,656) of any of the counties. Table 21 also contains the same data for Spanish-Americans. The lowest mean family income (\$1,556) of all occurs among Spanish-Americans in Montezuma County. Except for the two mean family income mentioned just above, the San Juan

\* Economics and Urban Problems, Heinz Kohler, D.C. Heath and Company, 1973.



TABLE 20a:  
INCOME OF FAMILIES AND UNRELATED INDIVIDUALS

	ARCHULETA	DOLORES	LA PLATA	MONTEZUMA	SAN JUAN
All Families	686	414	4,716	3,237	222
Less than \$1,000	25	17	134	82	-
\$1,000 - \$1,999	15	7	212	121	-
\$2,000 - \$2,999	23	15	289	245	6
\$3,000 - \$3,999	72	28	341	257	-
\$4,000 - \$4,999	70	29	289	259	11
\$5,000 - \$5,999	38	20	371	270	6
\$6,000 - \$6,999	54	55	437	304	24
\$7,000 - \$7,999	113	51	448	252	27
\$8,000 - \$8,999	39	30	370	302	33
\$9,000 - \$9,999	35	29	283	220	39
\$10,000 - \$11,999	90	47	518	336	23
\$12,000 - \$14,999	48	22	436	298	33
\$15,000 - \$24,999	42	53	429	219	16
\$25,000 - \$49,999	18	11	123	66	4
\$50,000 or more	4	-	36	6	-
Median Income	\$7,407	\$7,706	\$7,636	\$7,319	\$9,103
Mean Income	\$8,423	\$9,386	\$9,031	\$8,148	\$9,842
Families with female head	58	35	443	329	6
Mean Income	\$6,440	\$4,611	\$5,007	\$3,926	-
All families and unrelated individuals	845	483	6,745	3,986	319
Median income	\$6,810	\$7,167	\$5,546	\$6,253	\$8,160
Mean income	\$7,606	\$8,338	\$7,008	\$7,059	\$7,913
All unrelated individuals	159	69	2,029	749	97
Median income	\$2,453	\$1,539	\$1,446	\$1,649	\$3,136
Mean income	\$4,082	\$2,054	\$2,306	\$2,855	\$3,498
Female Unrelated individuals	92	46	1,081	447	75
Mean income	\$2,599	\$2,425	\$2,051	\$1,756	\$3,208



TABLE 20b:  
INCOME OF SPANISH-AMERICAN FAMILIES & UNRELATED INDIVIDUALS

	ARCHULETA	LA PLATA	MONTEZUMA
All Families	302	720	338
Less than \$1,000	12	35	16
\$1,000 - \$1,999	7	72	29
\$2,000 - \$2,999	5	58	37
\$3,000 - \$3,999	10	105	20
\$4,000 - \$4,999	20	84	36
\$5,000 - \$5,999	33	59	46
\$6,000 - \$6,999	53	44	35
\$7,000 - \$7,999	70	82	21
\$8,000 - \$8,999	29	94	40
\$9,000 - \$9,999	14	14	6
\$10,000 - \$11,999	32	31	7
\$12,000 - \$14,999	7	22	21
\$15,000 - \$24,999	6	14	7
\$25,000 - \$49,999	-	6	17
\$50,000 or more	4	-	-
Median Income	\$7,157	\$5,102	\$5,674
Mean Income	\$7,815	\$5,783	\$6,841
Families with female head	37	137	82
Mean Income	\$5,969	\$3,593	\$3,620
All families and unrelated individuals	333	968	390
Median Income	\$6,915	\$3,884	\$5,109
Mean Income	\$7,246	\$4,679	\$6,101
All Unrelated individuals	31	248	52
Median Income	\$1,646	\$1,252	\$1,316
Mean Income	\$1,702	\$1,475	\$1,291
Female Unrelated Individuals	16	145	22
Mean Income	-	\$1,683	-

SOURCE: U.S. Census, General Social and Economic Characteristics, 1970.



TABLE 21:  
FAMILIES UNDER POVERTY LEVEL

	# of families	% of all families	mean family income	mean income deficit
Archuleta	85	12.3	\$ 2,252	\$ 1,767
Spanish-American	51		3,022	1,983
Dolores	41	9.9	1,656	997
La Plata	646	13.7	2,029	1,556
Spanish-American	222		2,332	1,832
Montezuma	477	14.7	2,055	1,513
Spanish-American	73		1,556	2,116
San Juan	6	2.7	-	-
Region #9	1,255	13.5	2,032	1,528
Colorado	49,850	11.2	1,865	1,523

SOURCE: U.S. Census, General Social and Economic Characteristics, 1970.

TABLE 22:  
MEDIAN EARNINGS IN 1969 OF MALES AND FEMALES  
IN EXPERIENCED CIVILIAN LABOR FORCE

	Male	Female
Archuleta	\$6,750	\$2,000
Spanish-American	\$6,136	\$ 775
Dolores	\$7,682	\$3,333
La Plata	\$6,107	\$2,638
Spanish-American	\$4,428	\$2,069
Montezuma	\$6,347	\$2,504
Spanish-American	\$4,821	\$1,411
San Juan	\$7,717	\$2,700

SOURCE: U.S. Census, General Social and Economic Characteristics, 1970.



Basin, its counties and its Spanish-Americans have mean family incomes above that of Colorado (\$1,865).

Table 22 shows median earnings in 1969 of males and females in the experienced labor force. Spanish-Americans are consistently below median earnings of the total labor force.

What are the sources of income for individuals in the San Juan Basin? Table 23 attempts to answer this question. A wage or salary income is the source for the greater portion of people in every county and provides the highest mean income of the table's categories in Dolores, Montezuma, and San Juan Counties. Nonfarm self-employment and social security are the next most important sources of income for all counties, except in Dolores County where farm self-employment replaces non-farm self-employment.



TABLE 23:  
TYPE OF INCOME OF FAMILIES

	ARCHULETA	DOLORES	LA PLATA	MONTEZUMA	SAN JUAN
All families	686	414	4,716	3,237	222
with wage or salary income	564	365	3,799	2,683	216
mean wage or salary income	\$6,897	\$7,387	\$7,890	\$7,530	\$9,109
with nonfarm self-employment income	117	55	630	358	50
mean self-employment income	\$7,276	\$3,259	\$9,636	\$4,395	\$2,766
with farm self-employment income	94	197	558	459	-
mean self-employment income	\$3,731	\$3,425	\$3,042	\$2,553	\$ -
with Social Security income	118	107	955	609	6
mean Social Security income	\$1,698	\$1,480	\$1,658	\$1,473	\$ -
with public assistance or public welfare income	91	31	331	250	14
mean public assistance or public welfare income	\$1,108	\$ 877	\$1,427	\$1,238	\$ -
with other income	273	138	1,463	1,123	71
mean income	\$1,412	\$1,085	\$1,909	\$1,977	\$ 768

SOURCE: U.S. Census, General Social and Economic Characteristics, 1970.



### A. Work Force and Employment

Work is the means by which most people provide themselves with life's necessities. Table 24 shows work force and employment figures for 1970 and 1972. In 1970, the work force of the San Juan Basin was 65 percent male and 35 percent female. Participation ratio compares work force to the portion of the population between 18 and 65 years of age. The work force of the region is a smaller percentage of this portion of the population than is the work force of Colorado taken as a whole.

Table 25 gives an idea of past work force by comparing figures from 1956 and 1960 in the Durango and Cortez areas. The Durango area (Archuleta, La Plata, and San Juan Counties) had a larger work force in 1956 than in 1960 or 1970. By 1972, however, the work force exceeded the 1956 mark. In the Cortez area, (Montezuma, Dolores, and the west half of San Miguel Counties), the work force was larger in 1956 and 1960 than it has been since then.

Tables 26 a and b illustrate the variability of work force and employment through monthly figures for 1972 (Archuleta and La Plata Counties). The seasonality in the area's economy is reflected in these numbers. More employment occurs from May through October than during the winter months. The warmer months are times of activity for the major industries of tourism, agriculture, and lumber.

### B. Unemployment

Unemployment (also shown in Tables 24, 25, and 26a and b) relates total employment to work force. Between 1970 and 1972, unemployment percentages decreased in Archuleta and Montezuma Counties, while they increased in Dolores, La Plata, and San Juan Counties, creating a slight overall increase in the region as a whole (1970 = 6.2%, 1972 = 6.4%). Both years, the highest percentage of unemployment was experienced in Archuleta County.

The annual unemployment percentages of Table 24 are an incomplete picture. Table 26 shows unemployment percentages on a month-to-month basis for 1972, emphasizing the highly seasonal nature of employment in the region. In Archuleta County, unemployment rose as high as 19 percent in December, 1972.

There are three other reasons why these unemployment percentages are inadequate. Unemployment as given in the tables accounts for people who are involuntarily unemployed, that is, currently available and looking for work, temporarily laid off subject to recall, or scheduled to begin a new job within thirty days. (On the other hand, voluntarily unemployed persons include retired people and children in school.) However, unemployment statistics do not include the following:



TABLE 24:

## WORK FORCE

ARCHULETA DOLORES LA PLATA MONTEZUMA SAN JUAN REGION #9 COLORADO								
Total Population - 1970	2,733	1,641	19,199	12,952	831	37,356	2,207,259	
- 1972	2,500	1,600	20,900	13,800	800	39,600	2,364,000	
Work Force - 1970	910	567	7,024	4,348	302	13,151	909,581	
- Male	630	416	4,473	2,794	235	8,548		
- % Male	69.2%	73.4%	63.7%	64.3%	77.8%	65.0%		
- Female	280	151	2,551	1,554	67	4,603		
- % Female	30.8%	26.7%	36.3%	35.7%	22.2%	35.0%		
- 1972	1,135	474	7,778	5,194	437	15,018		
Total Employment - 1970	828	531	6,630	4,018	298	12,305	825,779	
- 1972	1,035	438	7,307	4,870	413	14,063		
Participation Ratio - 1970	65%	66%	67%	65%	63%	66%	73%	
Unemployment - 1970	82	36	394	300	4	846		
- %	9.0%	6.3%	5.3%	7.5%	1.3%	6.2%	4.0%	
- 1972	100	36	471	324	24	955		
- %	8.8%	7.6%	6.1%	6.2%	5.5%	6.4%		

SOURCES: 1970 data is from--U.S. Census, General Social and Economic Characteristics, and BLM Social Economic Data System, U.S. Census, 1970.

1972 data is from--1972 County Work Force Estimates, Department of Labor and Employment Division of Employment, Preliminary Annual Averages, February 1974, and Population of Colorado Counties, Colorado Division of Planning, Demographic Section, May 1974.



TABLE 25:  
AVERAGE ANNUAL WORK FORCE, 1956 and 1960

	Durango area*		Cortez area**	
	<u>1956</u>	<u>1960</u>	<u>1956</u>	<u>1960</u>
Nonfarm employment	6,552	5,966	4,621	6,354
Farm employment	<u>2,008</u>	<u>1,815</u>	<u>2,517</u>	<u>3,100</u>
Total employment	8,560	7,780	7,138	9,454
Unemployment	<u>184</u>	<u>396</u>	<u>169</u>	<u>408</u>
Total labor force	8,744	8,176	7,307	9,862

\* includes La Plata, San Juan and Archuleta Counties

\*\* includes Montezuma, Dolores, and the west half of San Miguel Counties

SOURCE: Local Area Statistics, prepared for the Resources and Community Development Division of the Colorado Department of Employment by the Bureau of Business Research, University of Colorado, 1961.



TABLE 26a:  
MONTHLY EMPLOYMENT DATA FOR ARCHULETA COUNTY - 1972

	WORK FORCE	TOTAL EMPLOYMENT	TOTAL UNEMPLOYMENT	% UNEMPLOYMENT
January	918	807	110	12.0
February	877	824	53	6.0
March	1,010	872	138	13.7
April	995	885	110	11.1
May	1,112	1,019	93	8.4
June	1,247	1,156	90	7.2
July	1,231	1,172	59	4.8
August	1,152	1,103	49	4.3
September	1,142	1,117	25	2.2
October	1,206	1,081	125	10.4
November	1,076	934	142	13.2
December	1,009	818	191	19.0

TABLE 26b:  
MONTHLY EMPLOYMENT DATA FOR LA PLATA COUNTY - 1972

	WORK FORCE	TOTAL EMPLOYMENT	TOTAL UNEMPLOYMENT	% UNEMPLOYMENT
January	6,762	6,266	496	7.3
February	6,933	6,341	592	8.5
March	6,908	6,426	482	7.0
April	7,220	6,788	432	6.0
May	7,475	7,070	405	5.4
June	8,062	7,498	564	7.0
July	7,938	7,505	433	5.5
August	7,772	7,407	365	4.7
September	7,832	7,464	368	4.7
October	7,648	7,241	407	5.3
November	7,450	6,929	521	7.0
December	7,263	6,748	515	7.1

SOURCE: 1972 Monthly Work Force Data, Colorado Division of Employment, May, 1973.



1) Discouraged workers - These are people who desire employment, but who have given up searching because they have experienced so much rejection that they regard the possibility of finding a job as hopeless.

2) Under-employed workers - These are people who are holding a part-time job (and are, therefore, considered employed), but who desire a full-time job.

3) Under-paid Workers - These are people who are working full-time yet are not earning enough to support themselves and any dependents above poverty level.

These three important employment problems are not currently incorporated into unemployment statistics. Discouraged workers are hidden in voluntary unemployment figures, while under-employed and under-paid workers are hidden in employment figures. When these problems are considered, as happens occasionally in special surveys, unemployment percentages can as much double. No documentation of these problems was found for the San Juan Basin. A social question to ask in this regard is if persons (unemployed, under-employed, and employed but still not earning a decent living) are being denied a right to prove their worth as a fully productive member of our society.

### C. Employment by Major Economic Sector

Table 27a shows employment figures and percentages by major economic sector, while Table 27b shows the same for Spanish-Americans. Retail trade and services are important throughout the region. Tourism-related activities are found within this sector (motels, restaurants, gas stations, and stores where tourists buy goods they need). Also important throughout the region are agriculture (except in San Juan County) and public education. This ranking is very similar to that of Colorado as a whole, except that agriculture is replaced by general manufacturing. Lumber-related manufacturing is prominent in Archuleta County as is mining in Dolores and San Juan Counties. In general, there is little difference between where Spanish-Americans work and where most of the total population works.

Some definitions relevant to Table 27 are as follows:

1) "Agriculture includes certain related services such as ginning, threshing, and veterinarian service; however, processing of products destined for human or animal consumption is included in food and kindred products manufacturing.

2) Mining includes oil and gas field work, but not refining (mfg.) or pipelines (transportation).

3) Furniture and lumber includes logging camps and contractors, saw and planing mills and other related wood products except paper and allied products.

4) Public education includes state colleges and universities.



TABLE 27a:  
EMPLOYMENT BY MAJOR ECONOMIC SECTOR

	ARCH- ULETA	DOLORES	LA PLATA	MONTEZUMA	SAN JUAN	REGION #9	COLORADO	11 WESTERN STATES
Agriculture, and Fisheries	131 16%	99 19%	667 10%	405 10%	0 0%	1,302 11%	38,093 5%	506,705 4%
Mining	19 2%	94 18%	126 2%	206 5%	168 56%	613 5%	14,232 2%	125,189 1%
Construction	95 11%	23 4%	504 8%	399 10%	18 6%	1,039 8%	54,668 7%	728,052 6%
Manufacturing	198 24%	42 8%	335 5%	297 7%	0 0%	872 7%	120,581 15%	2,421,825 19%
Furniture & Lumber	169	11	80	166	0	426	3,917	210,433
Food-kindred	0	0	70	48	0	118	16,043	213,272
Other	29	31	185	83	0	328	100,621	1,998,120
Transportation, and Communications	31 4%	38 7%	292 4%	138 3%	0 0%	499 4%	45,838 6%	678,102 5%
Utilities	4 1%	14 3%	158 2%	65 2%	0 0%	241 2%	14,840 2%	214,151 2%
Wholesale Trade	7 1%	15 3%	146 2%	124 3%	0 0%	292 2%	37,798 5%	551,164 4%
Retail Trade	120 14%	65 12%	1,498 23%	885 22%	24 8%	2,592 21%	145,447 18%	2,103,332 17%
Services	71 9%	46 9%	1,387 21%	556 14%	30 10%	2,090 17%	155,030 19%	2,328,535 19%
Financial, Insurance and Real Estate	0 0%	10 2%	232 3%	134 3%	5 2%	381 3%	46,399 6%	694,506 6%
Public Education	102 12%	36 7%	639 10%	360 9%	48 16%	1,185 10%	63,430 8%	836,014 7%
Public Administration	34 4%	49 9%	411 6%	327 8%	5 2%	826 7%	54,900 7%	812,524 7%
Total	828	531	6,630	4,018	298	12,305	825,779	12,460,973

SOURCE: BLM Social-Economic Data System, based on U.S. Census, 1970.



TABLE 27b:

## EMPLOYMENT BY MAJOR ECONOMIC SECTOR FOR SPANISH-AMERICANS

	ARCHULETA	LA PLATA	MONTEZUMA
Agriculture & Fisheries	39	70	41
%	12%	8%	10%
Mining	14	11	43
%	4%	1%	11%
Construction	23	74	34
%	7%	8%	8%
Manufacturing	124	111	59
%	39%	13%	14%
Furniture & Lumber	109	35	26
Food-kindred	0	27	14
Other	15	49	19
Transportation, Communi- cations, & Utilities	5	66	21
%	2%	8%	5%
Wholesale Trade	0	6	7
%	0%	1%	2%
Retail Trade	16	161	82
%	5%	18%	21%
Services	50	221	79
%	16%	25%	21%
Financial, Insurance, & Real Estate	0	12	0
%	0%	1%	0%
Public Education	26	94	21
%	8%	11%	5%
Public Administration	25	48	17
%	7%	6%	4%
Total Employed Spanish- Americans	322	874	379
% of Total Employed Persons	39%	13%	9%

SOURCE: U.S. Census, 1970.



5) Public administration includes civilian employees at all levels of government except those associated with education; it does not include persons in the armed forces." \*

Major employers as given by the Colorado Division of Commerce and Development, Community Development Section in its Colorado Community Profiles (July, 1973) for Durango, Cortez, and Pagosa Springs are as follows:

Durango:

- Mercy Hospital
  - medical services
  - 250 employees
- Fort Lewis College
  - higher education
  - 170 employees
- San Juan Lumber Company
  - lumber and wood products
  - 132 employees
- Colorado State Highway Department
  - highway engineering and maintenance
  - 125 employees
- Mountain Bell
  - telephone communications
  - 94 employees

Cortez:

- Nielson, Inc. (Dolores)
  - engineering and general contracting
  - 200 employees
- Montezuma Plywood Company
  - plywood and lumber
  - 175 employees
  - However, this company shut down during the summer of 1974, laying off all its employees
- Colorado Forest Products, Inc. (Dolores)
  - lumber
  - 55 employees
- Empire Electric Association, Inc.
  - electricity distribution
  - 40 employees

Pagosa Springs:

- Pagosa-Eaton International Corporation
  - new community
  - 100-350 (variable) employees
- San Juan Lumber Company, Inc.
  - lumber and wood products
  - 100 employees



- U.S. Forest Service  
 - forest administration  
 - 20 employees

- Wolf Creek Industries, Inc.  
 - lumber  
 - 12 employees

Unions found in the San Juan Basin are Bricklayers AFL-CIO and Carpenters AFL-CIO around Durango and the Milk Drivers and Dairy Employees around Cortez.

#### D. Place of Work

The major job centers of the San Juan Basin are Durango and Cortez. The commuting area for Durango includes all of La Plata County and west to Mancos in Montezuma County. The commuting area for Cortez includes all of Montezuma County and northwest to Dove Creek in Dolores County. Pagosa Springs serves as a job center for Archuleta County. Smaller towns such as Silverton, Dove Creek, Rico, Dolores, Mancos, Bayfield, and Ignacio, serve as limited, more localized job centers. Table 28 shows 1970 census data on place of work. "In rural communities", high commuting rates are likely to be caused by job shortages. In these areas, persons have to commute further distances to job centers because of unavailability of jobs close by. Consequently, rural areas with high commuting rates can generally be associated with high unemployment. Rural communities with high commuting rates tend to be those counties located in the south central and southwestern parts of the State which have high unemployment rates." \* Since the San Juan Basin has only minimal public mass transit (Continental Bus Lines), most of the above mentioned commuting is dependent on the use of private automobiles. The effects of even higher gasoline prices (or lack of gasoline altogether) on the employment situation are as yet unknown.

#### E. Employment Programs

The Colorado Department of Labor and Employment has offices in Durango and Cortez. Two training programs are available in these offices, Manpower Development and Training Act programs (initiated in 1962) and the Work Incentive Program.

"The objectives of the Manpower Development and Training Act are:

- a) To provide occupational training and supportive services for unemployed and under-employed persons who cannot obtain appropriate full-time employment without training.
- b) To upgrade present skills, and to meet the job needs of workers displaced by automation, technological change, geographical relocation of industry, and other changes in the job market." \*\*

\* Colorado Manpower Review, Colorado Department of Labor and Employment, May, 1974.

\*\* Colorado, A Regional Approach, Colorado Division of Commerce and Development, Community Development Section.



TABLE 28:  
PLACE OF WORK - 1970

	ALL WORKERS	WORKED IN COUNTY OF RESIDENCE	% OF ALL WORKERS	WORKED OUTSIDE COUNTY OF RESIDENCE	PLACE OF WORK NOT REPORTED
Archuleta	847	755	89.1	63	29
Dolores	515	409	79.4	106	0
La Plata	6,578	5,905	89.8	255	418
Montezuma	4,120	3,561	86.4	239	320
San Juan	259	249	96.1	10	0
Region #9	12,319	10,879	88.3	683	767

SOURCE: U.S. Census, General Social and Economic Characteristics, 1970.



"The main purpose of the Work Incentive Program (WIN) is to provide incentives, training opportunities, and necessary services to eligible welfare recipients to help them become self-supporting citizens of the community. The State Board for Community Colleges and Occupational Education enters into contractual agreements with public and private institutions to provide training for WIN enrollees." \*

Further investigation should determine whether or not other such employment programs, public or private, exist.

\* Colorado, A Regional Approach, Colorado Division of Commerce and Development, Community Development Section.



## /2.5/ Consumption and Investment Patterns

### A. Consumption

Durango is the hub of the San Juan Basin in most every respect, including consumer availability. It lacks only the most specialized of goods and services available in larger cities, although only one business handling some specific good or service may care for the whole region. Cortez, the next largest town, also has a wide variety of goods and services, although more limited than Durango. Concerning consumption in Cortez as well as Montezuma and Dolores Counties, in general, "A 1967 study of the southwest Colorado trade area conducted by the extension service of Colorado State University revealed one major problem of the retail trade sector in Montezuma and Dolores Counties. Many of the residents of the area, especially residents of the City of Cortez, are shopping outside of the area and outside of the state. For example, 20% of area residents buy their food outside the area, 25% buy clothing outside the area, and 30% bought their last automobile outside the area. Typically about 25% of goods and services bought by area residents are bought out of the area. The...total retail sales figure thus amounts to only about 75% of what area resident spend on retail goods annually. This would imply that as much as eleven million dollars of retail trade is being lost to competition from outside the area. The cause of this is probably the limited selection and poor shopping milieu typically found in Cortez."\*

The situations in the small towns typically have stores handling food, dry goods, gasoline, liquor, and perhaps farm supplies and vehicle repairs. If residents desire goods or services beyond these basics, they must travel to where these goods or services are available, mail order (if possible), or do without.

The entire San Juan Basin is tributary to markets in Farmington (New Mexico), Albuquerque (New Mexico), Grand Junction (Colorado), and Denver (Colorado). Also, the Dove Creek area utilizes markets in Utah. San Juan County residents can choose between Durango or Montrose markets, both over mountain passes.

Table 29 demonstrates trends in retail sales from 1948 to 1972, with no apparent adjustment to dollar-figures for inflation during this period. Sales for all counties have been increasing (except for a dip in 1954 in San Juan County). Where only small increases occurred, such as in Dolores County, it is questionable whether current-dollar increases exceeded the inflation rate. The figures demonstrate that Durango and Cortez account for most of the retail sales in La Plata and Montezuma Counties respectively. As is to be expected, these two counties had the highest values of retail sales in the region.

\* Economic Base Study, Montelores Sub-region Colorado, Joseph Andrus (WICHE), 1972.



TABLE 29:  
RETAIL SALES

	1948	1954	1960	1972
Archuleta	\$1,774,000	\$2,505,000	\$3,564,000	\$7,832,418
Pagosa Springs	- - - - not available	- - - - -	- - - - -	\$4,943,383
Dolores	\$ 972,000	\$1,121,000	\$2,025,000	\$2,517,727
La Plata	\$13,584,000	\$20,058,000	\$34,655,000	\$70,058,339
Durango	\$12,086,000	\$17,853,000	\$31,798,000	\$53,854,207
Montezuma	\$8,907,000	\$13,159,000	\$26,717,000	\$49,092,334
Cortez	\$5,782,000	\$8,436,000	\$22,942,000	\$37,251,320
San Juan	\$ 885,000	\$ 511,000	\$1,045,000	\$1,610,016

SOURCE: 1948, 1954, and 1960, data are from--Local Area Statistics for each county prepared for the Resources and Community Development Division of the Colorado Department of Employment, by the Bureau of Business Research, University of Colorado, 1961.

1972 data are from--Local Government Financial Compendium, Department of Local Affairs, Division of Local Government.



Table 30 (a and b) breaks down 1972 retail sales into business classes. For the region as a whole, food stores, auto dealers and service stations, miscellaneous retail stores, manufacturing, and building materials and farm equipment (in that order) were the top business classes by retail sales. These five classes, perhaps in different rankings, were major for the individual counties as well. Remember that service stations, retail stores, restaurants and bars, and lodgings are dependent on tourism for some portion of their retail sales. "The high level of automobile sales is surprising and the study concludes that this trend is not expected to continue far into the future. Projections of future retail sales indicate that food and public utilities should comprise the greater portion of all sales with the automotive sector trailing and apparel sales gaining markedly. At least a portion of the retail employment, that directly associated with the tourist trade, must be considered as basic employment for the purpose of projection and analysis. The lodging sector, a large portion of eating and drinking place employment, and a large portion of gasoline service station employment must be classed as basic along with smaller portions of the grocery sector employment and the apparel and general merchandise sector employment. While it is not possible to make an absolutely accurate delineation between tourist caused and non-tourist caused retail employment, we estimate that as much as 20% of retail employment may be associated with the tourist trade and must therefore be considered to be basic employment for the purposes of this analysis."\*

Although the above quote specifically applies to Montezuma and Dolores Counties, it may also be applicable to the rest of the region.

## B. Investment

Durango and Cortez lead the region in investment opportunities. Table 31 lists banks and savings and loan associations by county, while Table 32 partially lists other financial institutions (such as credit bureaus) and insurance companies.

"Bank deposits have almost tripled in the area since 1960. There are twelve commercial banks and two savings and loan associations in the project area, in addition to the Federal Land Bank and Production Credit Association. Loans are available from these sources as well as from major insurance companies that serve the area. Loans for rural areas are available from Farmers Home Administration. All in all, there appears to be no shortage of short-term loan money.

High land prices make it increasingly difficult to realize a return on land investment from the sale of agricultural products. Operating costs are also high in relation to the income derived from agricultural products, thus forcing many farmers and ranchers out of business. Land appreciation appears to be a major reason why other farmers and ranchers stay in business, but it often blocks the expansion sometimes needed to maintain an economical unit. Loan qualifications also make it difficult for many people in the \$9,000-\$12,000 income range.

\* Economic Base Study, Montelores Sub-region Colorado, Joseph Andrus (WICHE ), 1972.



TABLE 30a:  
RETAIL SALES BY BUSINESS CLASS

ARCHULETA DOLORES LA PLATA MONTEZUMA SAN JUAN					
--Thousands of Dollars--					
Agriculture, Forestry & Fisheries	0	0	2,301	21	0
Mining	0	0	110	33	0
Contract Construction	50	5	1,827	1,221	0
Manufacturing	2,600	63	7,123	3,320	52
Transportation, Communication, Electric, Gas & Sanitary Services	181	95	4,970	3,556	1
Wholesale Trade	136	2	3,201	4,218	0
Building Materials & Farm Equipment	894	1,086	5,766	3,856	0
General Merchandise	400	59	4,586	2,123	6
Food Stores	1,374	482	11,430	5,509	204
Auto Dealer & Service Station	2,295	606	13,086	11,779	171
Apparel & Accessory Stores	0	0	2,691	2,150	10
Furniture & Home Furnishings Stores	46	0	1,892	1,490	1
Eating & Drinking Places	759	106	4,749	2,553	358
Miscellaneous Retail Stores	812	147	9,858	5,978	606
Finance, Insurance, & Real Estate	0	2	109	6	0
Hotel & Other Lodging Places	453	18	6,294	2,003	189
Services Other Than Lodging	175	24	2,994	1,967	53
Government Facilities	0	0	0	445	0
Non-classifiable Establishments	0	73	1	0	2
Totals	10,175	2,767	82,989	55,228	1,654

SOURCE: 1973 Annual Report, Colorado Department of Revenue.



TABLE 30b:  
RETAIL SALES BY BUSINESS CLASS

	REGION #9	COLORADO
	--Thousands of Dollars--	
Agriculture, Forestry, & Fisheries	2,322	41,031
Mining	143	29,851
Contract Construction	3,103	286,037
Manufacturing	13,158	1,595,092
Transportation, Communication Electric, Gas & Sanitary Services	8,803	553,050
Wholesale Trade	7,557	1,128,794
Building Materials & Farm Equipment	11,602	655,789
General Merchandise	7,174	716,851
Food Stores	31,999	1,262,466
Auto Dealers & Service Stations	27,937	1,934,045
Apparel & Accessory Stores	4,857	332,282
Furniture & Home Furnishing Stores	3,429	345,078
Eating & Drinking Places	8,545	584,187
Miscellaneous Retail Stores	17,401	929,063
Finance, Insurance, & Real Estate	117	22,650
Hotel & Other Lodging Places	8,957	182,077
Services Other Than Lodging	5,223	589,690
Government Facilities	445	5,101
Non-classifiable Establishments	76	8,543
Totals	149,642	11,201,675

SOURCE: 1973 Annual Report, Colorado Department of Revenue.



TABLE 31:

## BANKS AND SAVINGS AND LOAN ASSOCIATIONS

ARCHULETA

Citizens Bank  
Mesa Verde Savings and Loan Association

DOLOROS

Dove Creek Bank

LA PLATA

Bank of Durango  
Bank of Ignacio  
Burns National Bank  
First National Bank  
Mesa Verde Savings and Loan Association

MONTEZUMA

The Dolores State Bank  
First National Bank  
Mesa Verde Savings and Loan Association  
Mancos State Bank

SAN JUAN

none



TABLE 32:

## OTHER FINANCIAL INSTITUTIONS AND INSURANCE COMPANIES

(PARTIAL LISTING)

ARCHULETA

Chicago Title Insurance Company  
Farmers Insurance Group  
Investors Diversified Services Incorporated  
Pagosa Insurance Agency

DOLORES

Stowe Insurance Company

LA PLATA

Beneficial Finance Company of Durango  
Credit Bureau of Durango Incorporated  
Eldredge Investment Company  
Farmers Insurance Group  
Farmers Union Insurance  
Frontier Adjusters Incorporated  
GAC Finance Incorporated  
Globe Life and Accident Incorporated  
Montrose Production Credit Association  
New York Life Insurance  
Newhall Investments  
Pacific Finance  
Prudential Insurance Company of America  
San Juan Federal Credit Union  
Gene Spotts Insurance  
State Farm Insurance  
Turner Securities and Investment

MONTEZUMA

Beneficial Finance Company of Cortez  
Cortez Insurance Agency  
Credit Bureau of Cortez  
Farm Bureau Insurance Agency  
IDS Life and Annuity Insurance Company  
Investors Diversified Services Incorporated  
Han Glockner Agency  
Johnson Insurance Agency  
Maley L. Agency  
Martin Agency  
Montrose Production Company  
New York Life Insurance Agency  
PM-MB Investment Company



## OTHER FINANCIAL INSTITUTIONS AND INSURANCE COMPANIES (cont.)

Prudential Insurance Company of America  
Rauh Agency  
State Farm Insurance Agency  
Sweeney Insurance Agency  
Western Hills Agency  
Wickman Insurance Agency

SAN JUAN

San Juan Abstract and Insurance Company



Small towns in the area are in dire need of better financing for needed improvements.

People and communities sometimes experience difficulty and confusion when applying for loans from the various governmental agencies. There are overlapping loan authorities that are sometimes in conflict with one another. There is a need for better coordination between agencies on loans and grants on all resource projects." \*

Further investigation could estimate the value of investment into the region's land as real estate.

\* San Juan Resource Conservation and Development Project Plan, 1973.



## /2.6/ PUBLIC FINANCE AND TAX BASE

Table 33 lists local sales taxes and the date each was initiated. Colorado has a state sales tax of 3 percent.

Table 34 (a,b,and c) is a summary of finances for each county, including governmental revenues. (Appendix A elaborates on county expenditures, public enterprise activities, pension funds, and revenues.) When revenues to a county from the State are subtracted from the sum of income taxes and sales taxes paid to the State, a positive or negative net results. Archuleta, Dolores, and San Juan Counties receive more from the State than they contribute to it. Due to this financial dependence, these counties are possibly subject to greater wielding by the State than La Plata and Montezuma Counties which generate more income for the State than they receive. This surplus is due to the extent of economic activity in these two counties. More people pay state income taxes; more and larger transactions take place and are taxed.



TABLE 33:  
LOCAL SALES TAXES (as of June, 1973)

	Tax rate	Effective date
Archuleta	1%	1/1/69
Dolores	none	
Dove Creek	1%	1/1/70
Rico	1%	1/1/73
La Plata	none	
Bayfield	1%	1/1/71
Durango	1%	4/1/62
Ignacio	1%	1/1/71
Montezuma	none	
Cortez	1%	3/1/65
Dolores	1%	1/1/69
Mancos	1%	1/1/69
San Juan	none	
Silverton	1%	1/1/69

SOURCE: Annual Report, Colorado Department of Revenue, 1973.



TABLE 34a:  
SUMMARY OF COUNTY FINANCES

	ARCHULETA	DOLORIS
Total Assessed Valuation	\$8,633,810	\$5,233,430
Total Revenue	623,500	595,700
Intergovernmental Revenue	441,100	427,500
Federal	97,700	76,700
General Revenue Sharing	51,700	12,500
Other	46,000	64,200
State	343,400	350,200
Highway Users Tax	253,000	304,900
Welfare	74,300	37,800
Other	16,100	7,500
Other Units	0	600
Total Current Expenditures	\$ 455,600	\$ 465,700
County Mill Levy	10	23
Total Property Taxes	\$ 474,610	\$ 468,475
County	86,340	120,370
School	355,042	309,680
Municipal	13,810	18,210
Special Taxes	19,418	20,215
State Income Taxes Paid	72,025	67,956
State Sales Taxes Paid	+136,336	+42,670
Total of these two	208,361	110,626
Revenues to County from State	-343,400	-350,200
Does the County provide a surplus to the State or receive more from the State than it generates?	\$ 135,039 receives from State	\$ 239,574 receives from State



TABLE 34b:  
SUMMARY OF COUNTY FINANCES

	LA PLATA	MONTEZUMA
Total Assessed Valuation	\$44,257,440	\$26,160,800
Total Revenue	2,566,200	1,823,700
Intergovernmental Revenue	1,535,600	1,132,200
Federal	249,100	134,500
General Revenue Sharing	209,100	83,000
Other	40,000	51,500
State	1,279,100	991,200
Highway Users Tax	551,200	531,400
Welfare	698,100	420,900
Other	29,800	38,900
Other Units	7,400	6,500
Total Current Expenditures	# 2,138,500	# 1,539,500
County Mill Levy	17	18
Total Property Taxes	# 3,327,470	# 2,234,291
County	741,312	474,032
School	2,087,964	1,491,158
Municipal	220,501	90,691
Special Taxes	277,693	178,410
State Income Taxes Paid	864,436	446,824
State Sales Taxes Paid	+1,465,621	+972,144
Total of these two	2,330,057	1,418,968
Revenues to County from State	-1,279,100	-991,200
Does the County provide a surplus to the State or receive more from the State than it generates?	# 1,050,957 provides a surplus	# 427,768 provides a surplus



TABLE 34c:

90

## SUMMARY OF COUNTY FINANCES

---

SAN JUAN	
<hr/>	
Total Assessed Valuation	\$4,148,610
Total Revenue	242,900
Intergovernmental Revenue	122,800
Federal	16,800
General Revenue Sharing	not applicable
Other	16,800
State	106,000
Highway Users Tax	88,500
Welfare	13,900
Other	3,600
Other Units	not applicable
Total Current Expenditures	\$ 158,100
County Mill Levy	21
Total Property Taxes	\$ 311,924
County	87,122
School	197,890
Municipal	24,575
Special Taxes	2,337
State Income Taxes Paid	35,102
State Sales Taxes Paid	+38,337
Total of these two	73,439
Revenues to County from State	<u>-106,000</u>
Does the County provide a surplus to the State or receive more from the State than it generates?	\$ 32,561 receives from State

SOURCE: 1972 Local Government Financial Compendium, Division of Local Government, Colorado Department of Local Affairs.



## /2.7/ INDUSTRY - ECONOMIC STRUCTURE

### A. Regional Earnings by Major Economic Sector

Industrial earnings are reported by the Bureau of Economic Analysis, U.S. Department of Commerce for economic trade regions, such as the San Juan Basin. "Earnings, as measured by the BEA, are comprised of wages and salaries, other labor income (such as commissions), and proprietors' income (net income of self-employed persons). Earnings do not include property income (e.g., interest and dividends) or transfer payments (e.g., social security or welfare)."

\*\* Total earnings in the San Juan Basin in 1970 came to about \$67 million (See Table 35), accounting for 77 percent of the region's personal income (See /2.3-A/). The remainder of personal income consists of property income and transfer payments.

Table 35 also breaks down total regional earnings into earnings by major economic sector. No data was available for the recreation industry. The government sector held the largest dollar figure in 1970 (\$15,680,000), one-third federal and two-thirds state and local. Public administration does not hold a major percentage of the employed work force, (See /2.4-C/), but it does provide a portion of the wage and salary incomes important in each county, (See /2.3-C/).

Wholesale and retail trade, and then services, follow closely behind the government sector earnings. These sectors represent three of the most important sectors throughout the region in terms of employment and retail sales (See /2.4C/ and /2.5-A/).

The fourth largest economic sector in terms of earnings was agriculture (\$7,344,000). This amount splits almost evenly into earnings connected with livestock (excluding dairy and poultry) and those connected with other agricultural pursuits, such as crop raising.

### B. Export and Import Related Earnings

"Export and import related earnings are estimated by comparing the size of all industries and income levels to expected transaction interrelationships between industries and between the producing sector and the consuming sector of the economy. Exports and imports are net, that is some portion of an industry's production may actually be exported but the net effect on income may still be measured as an import, if more of the product is used in the area than is locally produced."

\*BLM Social-Economic Data System, 1970.



TABLE 35:

ACTIVITY ANALYSIS BY MAJOR ECONOMIC SECTOR,  
REGION #9

INDUSTRY	EARNINGS (\$1,000)	EXPORT RELATED EARNINGS (1,000)	IMPORT RELATED EARNINGS (1,000)	INDUSTRY INCOME MULTIPLIER
Agriculture	\$ 7,344	\$ 4,205		
Livestock (excluding dairy-poultry)	3,650	2,617		1.568
Other Agriculture	3,694	1,588		1.340
Mining	\$ 3,913	\$ 3,204		
Metal	2,472	2,201		1.705
Fossil Fuels	727	489		1.533
Quarrying	624	514		1.652
Contract Construction	\$ 6,093	\$ 1,710		1.222
Manufacturing	\$ 5,863	\$ 2,223	\$ 12,662	
Food and Kindred Products	723		1,371	1.011
Lumber and Wood Products	3,540	2,223		1.497
Other Manufacturing	1,600		11,291	1.024
Transportation and Communication	\$ 2,772		\$ 456	1.043
Public Utilities	\$ 1,840	\$ 479		1.206
Wholesale and Retail Trade	\$12,104	\$ 2,735		1.179
Finance, Insurance, and Real Estate	\$ 1,830			1.000
Services	\$10,001	\$ 3,761		1.298
Recreation				
Government	\$15,680	\$ 5,045		
Federal	5,045	5,045		1.792
State and Local	10,635			1.000
Region Summary	\$67,350	\$23,362	\$ 14,232	.792

SOURCE: BLM Social and Economic Data System, based on U.S.  
Census, 1970.



In summary for the region, Table 35 indicates that about \$23 million of income are injected into the regional economy as a result of exports, while about \$14 million of income flow out from the regional economy as a result of imports. Net export related earnings exceed net import related earnings.

Export related earnings are highest for the federal portion of the government sector (about \$5 million). Agriculture follows (\$4.2 million), with export related earnings for livestock greater than those of other types of agriculture. The financial sector ranks third (\$3.8 million), while mining (predominantly metal mining) brings \$3.2 million into the region's economy through exports.

The greatest import related earnings occur in the manufacturing sector (excluding lumber and wood products, which are exported). A small amount of import related earnings occur within the transportation and communication sector.

### C. The Multiplier Effect

"The income multipliers [also given in Table 35] are of a 'Keynesian' type based on the propensity to locally consume local production and the contribution to economic growth brought about by the flow of export earnings. A multiplier can be viewed as having two parts, a primary effect and an expansion effect. The primary effect is always equal to one and represents the initial amount of income added to an economy. Hence, if an industry multiplier were, for example, equal to 1.530 it could be interpreted that the industry "supports" an additional 53 cents of income elsewhere in the economy for each dollar of income generated in the industry itself. Increases or decreases in industry income can therefore have multiplier effects throughout the local economy.....Caution should be exercised in interpretation of multipliers; the industry with the largest multiplier is not necessarily the most important or valuable industry in the local economy. Both the primary contribution (actual size of earnings) and the expansionary contribution of an industry have importance for local incomes."\*

In the San Juan Basin, the government sector has the largest multiplier (1.792) as well as the largest earnings value. This multiplier has the same expansionary effect of the multiplier of the region summarized (.792). Metal mining has the next largest multiplier, although its earnings are not the second largest in value. The three sectors which have import related earnings have the lowest multipliers of any of the economic sectors.

\* BLM Social-Economic Data System, 1970.



#### D. Major Manufacturing Firms

Table 36 is taken from the Directory of Colorado Manufacturers and lists major manufacturing firms by county and town. La Plata County has the largest number of such firms (34), followed by Montezuma (24), Archuleta (8), Dolores (6), and San Juan (1) Counties. In Montezuma County, the Montezuma Plywood Company shut down during the summer of 1974 due to the depressed price of plywood and a general slump in the building industry. The plant's \$3 million payroll was cut off from its employees. Perhaps the plant will reopen after a rise in plywood prices.

#### E. Development Organizations

Table 37 (a,b,c,and d) lists community, area, and state-wide industrial development organizations and a local real estate board. Also of note are the developing Durango Industrial Park (250 acres) and the Western Colorado Power Company site in Durango (150 acres), the Cortez Industrial Park (98 acres), and Pagosa Industrial sites (545 acres).

Uplands Management Consultants are located in Durango. "Uplands is a private, non-profit (IRS 501(c)(3)) Corporation under contract to the U.S. Department of Commerce, Office of Minority Business Enterprise, Washington, D.C., performing business development organization functions for the purpose of: a. Increasing the number of minority business enterprise starts; b. Strengthening existing minority business entrepreneurs; and c. Improving opportunities for socially or economically disadvantaged persons to own successful businesses, in accordance with Executive Order 11625. The reason for Uplands' concern for minority business development is that while minorities constitute 17% of the U.S. population, they operate 4% of the nation's businesses, which account for only 0.7% of the total receipts of all U.S. firms."\*

#### F. Water and Agriculture

Agriculture in the San Juan Basin is intimately connected with water availability. "The two major basins in the San Juan Resource Conservation and Development are the product of the San Juan and Dolores Rivers...Approximately 2.5 million acre-feet of water is produced annually by these streams with the majority attributed to the San Juan. This represents a yield of 340 and 173 acre-feet of water per square mile drained per year for the San Juan and Dolores river basins respectively.

\*Uplands, Inc. brochure.



TABLE 36:

## THE DIRECTORY OF COLORADO MANUFACTURERS

## HOW TO USE THE DIRECTORY

The format for each listing is as follows:

Company name  
 Address, Zip code, Telephone number  
 Main office and address, if applicable  
 Form of organization, Year of Establishment,  
 Distribution area, Employment range  
 Senior official's name and title  
 Top marketing official's name and title  
 Parent company and address, if a subsidiary  
 Mailing address, if different  
 SIC code(s) and product description(s)

## Abbreviations:

Corporation	Corp
Partnership	Part
Sole Proprietorship	S Prop
Estate	Estate
Cooperative	Coop
Division	Div
Subsidiary	Subsid
Local	Loc
County	Cnty
District	Dist
State	St
Regional	Reg
National	Nat
International	Intl

## N E C

In the geographical and product sections, the abbreviation "N E C" refers to "Not Elsewhere Classified."



## THE DIRECTORY OF COLORADO MANUFACTURERS (cont.)

ARCHULETA

## BAYFIELD

-Bartholomew Lumber  
 420 South 81122 968-5723  
 S Prop Est-1940 State 0 to 9  
 L Bartholomew Owner  
 P O Box 61 Bayfield 81122  
 2411 Logging camps + Logging contractors  
 2421 Sawmills and planing mills, General

## PAGOSA SPRINGS

-Day Lumber Co. Inc  
 P O Box 351 81147 968-5832  
 Corp Est-1946 Reg 0 to 9  
 P Day Pres  
 2421 Sawmills and planing mills, General

-Pagosa Ready Mix  
 81147 968-5933  
 S Prop Est-1968 Dist 0 to 9  
 David Smith Owner  
 Box 132 Pagosa Springs 81147  
 3273 Ready-mixed concrete

-Pagosa Springs Sun  
 81147 968-2200  
 S Prop Est-1911 Dist 0 to 19  
 G Edmonds Owner  
 2711 Newspapers

-Riverside Ready Mix  
 81147 968-5894  
 Part Est-1972 Dist 0 to 9  
 Louis J Tornatore Partner  
 C E Mills Partner  
 P O Box 536 Pagosa Springs 81147  
 3272 Concrete Products, NEC  
 3273 Ready-mixed concrete

-Rocky Mountain Lumber Co.  
 81147 968-2435  
 Part Est-1970 Dist 0 to 9  
 T Barber Gen Mgr  
 2421 Sawmills and planing mills, General



## THE DIRECTORY OF COLORADO MANUFACTURERS (cont.)

-San Juan Lumber Co Inc  
 P O Box 547 81147 968-2211  
 Corp Reg 250 to 999  
 J Hudspeth Pres  
 2421 Sawmills and planing mills, General

-Wolf Creek Industries Inc  
 P O Box 896 81147 968-2258  
 Part Est-1965 Reg 0 to 19  
 Jim Watkins Pres  
 2421 Sawmills and planing mills, General  
 2441 Nailed wood boxes and shook

DOLORES

## CAHONE

-Texsure Craft  
 81320 562-2162  
 Reg 0 to 19  
 Bertha Lettman Owner  
 3999 Manufacturing Industries, NEC

## DOVE CREEK

-Dove Creek Bean Elevators  
 81324 677-2215  
 S Prop Est-1970 Ntl 0 to 9  
 O Owens Owner  
 2034 Dehydrated Fruits, Vegetables, Soups

-Dove Creek Press  
 Highway 160 81324 677-2214  
 Part Est-1940 County 0 to 19  
 L W Pleasant Owner  
 2711 Newspapers

-Frazer Milling Co  
 81324 677-2248  
 0 to 19  
 2034 Dehydrated Fruits, Vegetables, Soups

-Hi Country Elevators  
 81324 677-2251  
 S Prop Est-1970 County 0 to 9  
 J W Crowley Pres  
 P O Box 533 Dove Creek 81324  
 2034 Dehydrated Fruits, Vegetables, Soups



## THE DIRECTORY OF COLORADO MANUFACTURERS (cont.)

-Romer Mercantile + Grain  
 81324 677-2218  
 S Prop Est-1970 County 0 to 9  
 D Corlett Owner  
 2048 Prepared Feeds, NEC

LA PLATA

## BAYFIELD

-Garnand Lumber Co  
 West of Bayfield 81122 884-2603  
 Part Loc 0 to 19  
 J + M Garnand Partners  
 P O Box 257 Bayfield 81122  
 2421 Sawmills and planing mills, General  
 -Great Scot Timber + Logging  
 East of Bayfield 81122 798-0143  
 Corp Est-1968 Reg 0 to 9  
 J F MacDonald Pres  
 P O Box 17 Bayfield 81122  
 2421 Sawmills and Planing mills, General  
 2431 Millwork

-Shipley Mineral House  
 Gem Village 81122 884-2632  
 0 to 19  
 3911 Jewelry, Precious Metal  
 3915 Jewelers' Materials + Lapidary work

## DURANGO

-Basin Co-op Inc  
 South of Durango 81301 247-3066  
 Coop Est-1953 Dist 10 to 19  
 L Squires Pres  
 R J Reynolds Mgr  
 P O Box 697 Durango 81301  
 2048 Prepared Feeds, NEC  
 2047 Dog, Cat, and other Pet food

-Basin Mattress  
 2615 Main Ave 81301 247-4676  
 S Prop Est-1961 Loc 0 to 9  
 R L Connor Owner  
 2515 Mattresses and Bedsprings



## THE DIRECTORY OF COLORADO MANUFACTURERS (cont.)

- Basin Packing Co  
 Rt 2 Box F97 81301 247-3039  
 S Prop Est-1952 County 0 to 19  
 P Simon Owner  
 2011 Meat Packing Plants
  
- Basin Saddle Shop  
 Rt 2 Box 229 81301 247-5338  
 S Prop Est-1965 County 0 to 19  
 P A Palmer Owner  
 3199 Leather Goods, NEC
  
- Burnett Construction Co  
 East End 6th St 81301 247-2174  
 Corp Est-1931 Dist 20 to 99  
 J J Siegrist Pres  
 Lester A Kelly V P  
 P O Box 1712 Durango 81301  
 3273 Ready-mixed concrete
  
- City Market + Bakery  
 1316 Main 81301 247-3962  
 Part Est-1950 Dist 20 to 99  
 City Markets, Inc Grand Junction, Colo  
 P O Box 1509 Durango 81301  
 2051 Bread, cake, and related products
  
- Clover-Rich - Hi Land Dairy  
 1315 Main Ave 81301 247-0543  
 Coop Est-1959 Reg 20 to 49  
 Hi Land Dairy 700 Vine St Murray, Utah  
 P O Box 558 Durango 81301  
 2021 Creamery Butter  
 2024 Ice Cream and frozen desserts  
 2026 Fluid Milk
  
- Coca-Cola Bottling Co  
 7th St + Truck by pass 81301 247-1560  
 235 Korber Bldg Albuquenm 87101  
 Corp Est-1937 Dist 20 to 99  
 J B Peters Gen Mgr  
 F A Mapel Pres  
 2086 Bottled and canned soft drinks
  
- Durango Herald Inc  
 1275 Main Ave 81301 247-3504  
 Corp Est-1881 Dist 20 to 49  
 A Ballantine Owner  
 E Kerr Sales Manager  
 P O Box 61 Durango 81301  
 2711 Newspapers



## THE DIRECTORY OF COLORADO MANUFACTURERS (cont.)

-Durango Ice + Produce  
 6 + Railroad Ave 81301 247-2330  
 Corp Est-1947 Dist 0 to 9  
 E V Cory Owner  
 P O Box 871 Durango 81302  
 2097 Manufactured ice

-Durango Ornamental Iron Inc  
 1502 Main 81301 247-0746  
 Corp Est-1961 Dist 0 to 19  
 GSM swilling Pres  
 3441 Fabricated Structural Metal  
 3591 Machine shops, Jobbing and Repair  
 3446 Architectural Metal Work

-Eagle Block Co  
 Route 2 Box 220 81301 247-3636  
 Part Est-1950 County 0 to 19  
 G Piccoli Partner  
 3271 Concrete block and brick

-Farmers Supply of Durango Inc  
 401 Camino del Rio 81301 247-0660  
 8 Town Plaza Durango Colo  
 Corp Est-1921 Dist 0 to 19  
 F V Kroeger Pres  
 P O Box 1090 Durango 81301  
 2047 Dog, Cat, and other pet food  
 2048 Prepared feeds, NEC

-Fiberglass and Fluid Prod Inc  
 Rt 3 Box 232 81301 247-0346  
 Corp Est-1972 Reg 0 to 9  
 Mrs M E Prickett Pres  
 3079 Miscellaneous plastics products

-Four Corners Sign + Neon Corp  
 112 W 6th 81302 247-4624  
 Corp Est-1958 Reg 0 to 19  
 V L Noe Pres  
 P O Box 677 Durango  
 3993 Signs and advertising displays

-Garden Elevator + Feed  
 P O Box 1759 81302 247-1780  
 Corp Est-1961 Reg 0 to 19  
 B F Lee Jr Pres  
 2048 Prepared feeds, NEC  
 2047 Dog, Cat, and other pet food



## THE DIRECTORY OF COLORADO MANUFACTURERS (cont.)

- Moneyville
  - Animas Valley 81301 247-1474
  - S Prop Est-1920 Loc 0 to 19
  - A J Mayer Owner
  - 2099 Food Preparations, NEC
- Jackson-David Bottling Co
  - 150 W 7th St 81301 247-1252
  - Corp Est-1944 Reg 20 to 99
  - H J Clark Pres
  - Keith Jones Sales Mgr
  - P O Box 717 Durango 81301
  - 2086 Bottled and canned soft drinks
- Las Animas Wood Products
  - South Durango 81301 247-2088
  - Corp Est-1958 Reg 0 to 19
  - R E Gomez Pres
  - P O Box 554 Durango 81301
  - 24 1 Millwork
- Mesa Paving Co
  - 81301 247-1150
  - S Prop Est-1957 Dist 0 to 19
  - M L Wiley Owner
  - P O Box 379 Durango 81301
  - 2951 Paving Mixtures and Blocks
- Mickelson Jewelry Co
  - Rt 1 Box 351 81301 247-0011
  - S Prop Est-1954 Reg 0 to 9
  - C R Mickelson Owner
  - 3911 Jewelry, Precious Metal
- Mountain Bouquet
  - Rt 3 Box 277 81301 247-2182
  - S Prop Reg 0 to 19
  - V Culhane Owner
  - 2033 Canned Fruits and vegetables
  - 2065 Confectionery Products
  - 2099 Food Preparations, NEC
- New York Bakery
  - 728 Main Ave 81302 247-0763
  - S Prop Est-1883 Loc 0 to 9
  - O C Creviston Owner
  - P O Box 830 Durango 81301
  - 2051 Bread, Cake, and related products



## THE DIRECTORY OF COLORADO MANUFACTURERS (cont.)

## -Oliger Sheet Metals

151 E 15th St 81301 247-4249  
 County 0 to 19  
 L J Oliger Owner  
 P O Vox 929 Durango 81301  
 3444 Sheet Metal Work  
 3449 Miscellaneous Metal Work

## -Rocky Mountain Glassware Plant

West Animas Valley 81301 247-3491  
 Part Est-1965 Reg 0 to 19  
 O J Hamon Owner  
 P O Box 3308 Durango 81302  
 3231 Products of Purchased Glass

## -Sheppard Baking Co

7th + Railroad Ave 81301 247-1209  
 Corp Est-1954 Dist 0 to 19  
 Pat Halphen Pres  
 P O Box 947 Durango 81301  
 2051 Bread, Cake, and related products

## -Telluride Iron Works Co

S of Durango 81301 247-1343  
 Corp Est-1898 Dist 20 to 49  
 C J Helmericks Jr Pres  
 P O Box 560 Durango  
 3441 Fabricated Structural Metal  
 3532 Mining Machinery  
 2591 Machine shops, Jobbing and repair

## -Treasure Tunnel

629 Main Ave 81302 247-3704  
 S Prop Est-1964 Intl 0 to 19  
 R W Glenn Owner  
 P O Box 3417 Durango 81301  
 3911 Jewelry, Precious Metal  
 3915 Jewelers' Materials + Lapidary work  
 3999 Manufacturing Industries, NEC

## -Tri-State Printing + Basin Office Supply

801 2nd Ave 81301 247-4096  
 Corp Est-1957 Reg 0 to 19  
 C E Snook Pres  
 P O Box 1550 Durango 81301  
 2751 Commercial Printing, Letterpress



## THE DIRECTORY OF COLORADO MANUFACTURERS (cont)

-United Stationery + Confectionery Co  
 920 Main 81301 247-3984  
 Corp Est-1895 Dist 0 to 9  
 F J Will Pres  
 P O Box 1280 Durango 81301  
 2065 Confectionery Products

## HESPERUS

-Four Corners Rock Shop  
 81326 385-4597  
 Part Est-1962 Reg 0 to 19  
 M Michael Gen Mgr  
 3911 Jewelry, Precious Metal

MONTEZUMA

## CORTEZ

-Bar C Manufacturing Company  
 South of Cortez 81321 565-7301  
 S Prop Ntl 0 to 9  
 R Cobb Owner  
 P O Box 1335 Cortez 81321  
 3599 Machinery, except electrical, NEC  
 3715 Truck Trailers  
 2499 Wood Products, NEC

-Beaber Printing Co  
 24 S Washington 81321 565-3877  
 S Prop Est-1928 Loc 0 to 9  
 C Beaber Owner  
 2751 Commercial Printing, Letterpress

-City Market Bakery  
 117 N Chestnut 81321 565-9488  
 Corp County 0 to 19  
 2051 Bread, Cake, and related products

-Cortez Milling Co  
 309 N Market 81321 565-3119  
 Corp Est-1964 Reg 0 to 19  
 H Tanner Mgr  
 P O Box 1030 Cortez 81321  
 2041 Flour and other grain mill products



## THE DIRECTORY OF COLORADO MANUFACTURERS (cont.)

- Cortez Neon Sign  
 1430 E Main 81321 565-7801  
 S Prop Est-1957 Dist 0 to 9  
 H D Cox Owner  
 3953 Marking Devices  
 3993 Signs and Advertising Displays  
 3444 Sheet Metal Work  
 3714 Motor Vehicle Parts and Accessories
- Cortez Newspapers Inc  
 37 E Main 81321 565-8527  
 S Prop Est-1888 Dist 0 to 19  
 C D Brown Pres  
 2711 Newspapers
- Douthit Machine Shop  
 495 N Broadway 81321 565-7548  
 S Prop Est-1955 Loc 0 to 9  
 G C Douthit Owner  
 3591 Machine Shops, Jobbing and Repair
- Dye Carbonic, Inc.  
 1203 E Main 81321 565-7062  
 Corp Est-1949 Reg 0 to 19  
 Gil V Due Pres  
 Ray Mays, Jr V P  
 Dye Carbonic, Inc Phoenix Ariz  
 P O Box 788 Cortez 81321  
 2813 Industrial Gases
- Dwain Lively Logging  
 428 S Park 81321 565-7221  
 S Prop Est-1960 County 0 to 19  
 Dwain Lively Owner  
 2411 Logging Camps + Logging Contractors
- Mod Dairies Inc  
 RR South Route 81321 565-8613  
 Corp Est-1969 Reg 10 to 19  
 Carl Todacheene Pres  
 Simpson Bekis  
 P O Box 1406 Cortez 81321  
 2026 Fluid Milk  
 2024 Ice Cream and Frozen Desserts



## THE DIRECTORY OF COLORADO MANUFACTURERS (cont.)

## -Montezuma Plywood Co

West of Dolores 81321 882-7235

Southwest Forest Indust Phoenix Ariz

Subsid Est-1965 Reg 100 to 249

H J Vande Voorde Plt Mgr

J Richards Sales Mgr

Drawer YY Cortez 81321

2421 Sawmills and planing mills, General

2436 Softwood Veneer and plywood

## -Nizhonie Inc

810 $\frac{1}{2}$  North Broadway 81321 565-7079

Corp Est-1970 Reg 0 to 9

Frank Austin Pres

P O Box 729 Cortez 81321

2262 Finishing Plants, Synthetics

## -Northcott Ready-Mix

North Broadway 81321 565-3310

Corp Est-1954 County 10 to 19

Jerry W Conner V P

P O Box 688 Cortez 81321

3273 Ready-mixed Concrete

## -Northside Packing Co Inc

Lebanon Rd 81321 565-3011

Corp Est-1964 Dist 0 to 9

T E Howard Pres

P O Box 866 Cortez 81321

2011 Meat Packing Plants

## -Porter Alfalfa Products Inc

N W of Cortez 81321 565-9667

Corp Est-1966 Reg 0 to 19

C Porter Pres

Rt Box 180-H Cortez 81321

2048 Prepared Feeds, NEC

2047 Dog, Cat, and other pet food

## -United Structures

S W of Cortez 81321 565-3953

Corp Est-1969 Reg 0 to 9

C D Uhl Mgr

P O Box 670 Cortez 81321

3523 Farm Machinery and Equipment



## THE DIRECTORY OF COLORADO MANUFACTURERS (cont.)

-Vita Kist Baker's  
 44 W Main 81321 565-7861  
 Part Est-1947 County 0 to 9  
 A + L Bonan Partners  
 2051 Bread, Cake, and related products

-Whitney Cartridge Co Inc  
 South U S 160 81321 565-7749  
 Corp Intl 0 to 9  
 David C Whitney Owner  
 3482 Small Arms Ammunition

## DOLORES

-Colorado Forest Products Inc  
 81323 882-4488  
 Corp Est-1962 Reg 50 to 99  
 D Atchley Pres  
 V T Boyd Secy  
 P O Box 623 Dolores 81323  
 2421 Sawmills and planing mills, General

-Dolores Star Press  
 4th and Central 81323 882-4486  
 Part Est-1897 Dist 0 to 19  
 L W Pleasant Owner  
 2711 Newspapers

-Mountain Packing Co  
 East of Dolores 81323 882-7242  
 0 to 19  
 2011 Meat Packing Plants

## MANCOS

-Frazier, Paul  
 336 N Main St 81328 533-7409  
 S Prop Est-1960 County 0 to 19  
 P A Frazier Pres  
 P O Box 517 Mancos 81328  
 2411 Logging Camps + Logging Contractors

-Mancos Times-Tribune  
 135 Grand Ave 81328  
 Corp Est-1892 Dist 0 to 9  
 B Mc Kelvie Editor  
 2711 Newspapers



## THE DIRECTORY OF COLORADO MANUFACTURERS (cont.)

-Ohio Match Co  
 955 W Grand Ave 81328 533-7711  
 Ohio Match Company Wadsworth, Ohio  
 Corp Est-1947 Intl 20 to 49  
 P Gray Mgr  
 Hunt-Wesson Foods Inc, Fullerton, Cal  
 P O Box 457 Mancos 81328  
 2499 Wood Products, NEC

## YELLOW JACKET

-Southwest Colo Bean Producers, Inc.  
 81335 562-2352  
 Coop Est-1970 Reg 0 to 9  
 W L Kvasnicka Gen Mgr  
 2034 Dehydrated Fruits, Vegetables, Soups

SAN JUAN

## SILVERTON

-Silverton Standard + Miner  
 1257 Greene St 81433 387-5477  
 S Prop Est-1875 County 0 to 9  
 L J Duthie Publ'r  
 2711 Newspapers

SOURCE: The Directory of Colorado Manufacturers, Bureau  
of Business Research, University of Colorado, 1973.



TABLE 37a:

## COMMUNITY INDUSTRIAL DEVELOPMENT OR CIVIC ORGANIZATION:

<u>City &amp; County</u>	<u>Name &amp; Address</u>	<u>Telephone</u>
Cortez, Montezuma	Cortez Chamber of Commerce, P.O. Drawer M, Cortez, 81321	565-3741
Dolores, Montezuma	Dolores Chamber of Commerce, P.O. Box 602, Dolores, 81323	882-4313
Dove Creek, Dolores	Dove Creek Chamber of Commerce, P.O. Box 527, Dove Creek, 81324	565-3414
Durango, La Plata	Durango Chamber of Commerce, P.O. Box 1311, Durango, 81301	247-0312
Ignacio, La Plata	Southern Ute Tribe, Ignacio, 81137	563-4525
Mancos, Montezuma	Mancos Valley Development Commission, P.O. Box 145, Mancos, 81328	533-7703
Rico, Dolores	Rico Chamber of Commerce, Rico, 81322	967-2584
Silverton, San Juan	Silverton Chamber of Commerce P.O. Box 441, Silverton, 81433	387-5505

TABLE 37b:

## AREA INDUSTRIAL DEVELOPMENT ORGANIZATIONS

<u>Area</u>	<u>Name &amp; Address</u>	<u>Telephone</u>
Archuleta County	Archuleta County Chamber of Commerce, Pagosa Springs, 81147	968-2360
San Juan Basin	Area Development Office, Courthouse, Cortez, 81321	565-7568
Western Colorado	Club 20, Box 550, Grand Junction, 81501	242-3264



TABLE 37c:

## STATE-WIDE INDUSTRIAL DEVELOPMENT ORGANIZATIONS

<u>Regions</u>	<u>Name and Address</u>	<u>Telephone</u>
9	Area Development Department, Atchison, Topeka and Santa Fe Railroad Co., 518 17th Street, Denver, 80202	266-3573
All	Public Affairs Department, Colorado Interstate Gas Company, P.O. Box 1087, Colorado Springs, 80901	473-2300
All	Area Development Department, Denver & Rio Grande Western Railroad, P.O. Box 5482 - T.A., Denver, 80217	222-5533
All	Area Development Department, Mountain Bell, 930 15th Street, Denver, 80202	825-4121
All	Area Development Department, Public Service Company of Colorado, P.O. Box 840, Denver, 80201	297-7734

TABLE 37d:

## LOCAL REAL ESTATE BOARDS

<u>Region</u>	<u>Area</u>	<u>Address &amp; Telephone</u>
9	Four Corners	Four Corners Real Estate Board, 631 East Main Street, Cortez, 81321, 565-3404

SOURCE: Colorado; A Regional Approach, Colorado Division of  
Commerce and Development, Community Development Section.



Three federally-funded reservoirs have been constructed in the project area. These are the Vallecito, Lemon, and Jackson Reservoirs. There are 19 private reservoirs of 500 acre-feet or more capacity also within the area, many of which were constructed with federal assistance...In addition, there are six transmountain diversions that divert on an average of 62,000 acre-feet of water annually from the San Juan Basin across the Continental Divide into the Rio Grande Basin.

Initially, irrigation developments were located along streams where water could be supplied by direct diversion. Since the better land was located on the mesas above, gravity systems were constructed with ditch headings far upstream from their intended use in order to gain sufficient elevation for the water to flow to these mesa tops. Adequate sites for ditch headings or diversions were scarce, consequently, ditch systems parallel each other for many miles. There are approximately 195,000 acres of irrigated land within the project area with a potential for another 250,000 acres. Much of the irrigated land produces hay, pasture and forage crops-agricultural operations that are primarily devoted to livestock production. These crops complement the vast grazing areas common to the Basin.

The runoff discussed earlier occurs at a time in the agricultural cycle when it cannot be adequately used, causing a shortage of water during the growing months of July, August, and September. There is a shortage of impounded irrigation water, too, which affects the flow of water supplied to privately developed lands. Principal irrigation systems are the Mancos and Florida Conservancy Districts, Pine River District, Summit Reservoir and Irrigation Company, and Montezuma Valley Irrigation Company within the San Juan Basin. In the Dolores River Basin, principal systems are the Hughes, Lone Cone, Paradox Valley Canal, and Farmers Water Development. These companies, in combination, serve 71 percent of all irrigation cropland in the two river basins.

The Montezuma Valley Irrigation Company and the Summit Reservoir and Irrigation Company have constructed diversion and storage facilities within the Dolores River basin for export of water to the San Juan River basin. This water is, of course, still used within the Resource Conservation and Development area.

The problems associated with irrigation are numerous and inter-related. Agricultural irrigation accounts for 80 percent of the 267,000 acre-feet of water used in the project area. Yet, this is only 10 percent of the 2.5 million acre-feet of water produced there annually. Maximum utilization of our water resources are not being realized at the present time because of early runoff and the lack of suitable irrigation water storage facilities.... Funding and construction of water projects are needed to permit beneficial use of Colorado's share of Upper Basin waters. The Dolores and Animas-La Plata irrigation projects have been author-



ized by Congress as part of the Colorado River Basin Project and funds have been allocated for advanced planning. Their construction is to proceed concurrently with the construction of the Central Arizona Project, a similar effort.

Smaller projects which will satisfy local situations are also needed. In this regard, Echo Ditch Reservoir, Bighbee-Archuleta, Red Mesa, Spruce Lake, and other projects have been proposed. If these regulating reservoirs are constructed, they will make water available during the warm summer months when it is most beneficial to growing crops...The Watershed Protection and Flood Prevention Act of 1956 (Public Law 566) provides technical and financial assistance in planning and carrying out works of improvement to protect, develop, and utilize the land and water resources in small watersheds. PL-566 provides for assistance in planning, designing, and installing watershed works of improvement; in sharing costs of flood prevention, irrigation, drainage, municipal water, sedimentation control, fish and wildlife developments, and public recreation; and in extending long term credit to help local interests with their share of the costs. The Pine River Watershed project is the only PL-566 project within the San Juan Basin. The project consists of two floodwater detention structures and extensive irrigation system rehabilitation.

There is considerable potential for a number of watershed projects under Public Law 566 throughout the San Juan Basin. Water conservancy districts, SCD's, counties, towns and individual ditch companies are potential watershed project sponsors.

Financing of water resources projects is difficult for local people to secure without help. Cost-sharing programs through PL-566, RC & D , or Four Corners Regional Commission, plus low interest loans through FHA or other money lending institutions, is essential. \*\*

Table 38 shows value of agricultural production by crop for 1972 and the value of all crops in past years. No apparent inflation adjustments have been made to dollar figures.

\*Cropland within the project area comprises approximately 456,000 acres...Irrigation water is available for 195,000 of these acres, leaving the remaining 261,000 acres to be dry-farmed. The largest single use of irrigated cropland is for hay and pasture. Topography confines farming primarily to mountain valleys and plateaus and limits significant increases in acreage. However, development of proposed irrigation projects would bring about a major shift from dry farming to irrigation...A lack of markets and the high cost of transportation also restrict cropland production. Essentially, local markets handle only dry beans and small grains. Rail service does not exist and truck travel over two-lane mountain highways out of the San Juan Basin is slow...The 195,000 acres of irrigated cropland in the project area produce four major crops: pasture grass, hay, small



TABLE 38: VALUE OF AGRICULTURAL PRODUCTION

112

1972	Archu- leta	Dol- ores	La Plata	Mont- ezuma
All Wheat	\$ 23,100	\$ 787,100	\$ 364,400	\$ 416,000
Corn(for grain, & silage)	9,050	37,400	600,400	125,500
Barley	--	--	61,900	120,500
Sorghum grain	--	--	16,600	--
All other crops**	401,200	1,214,000	2,300,000	3,353,000
All crops	\$433,350	\$2,038,500	\$3,343,300	\$4,015,000
# of Milk cows and heifers that have calved	>100	--	950	900

All crops	Archu- leta	Dol- ores	La Plata	Mont- ezuma
1949	\$137,849	\$1,636,585	\$1,088,558	\$2,118,776
1954	114,458	1,368,979	844,946	2,362,234
1959	90,938	761,940	613,495	1,638,099
1969	514,030	2,352,850	3,139,680	4,479,250
1974	\$433,350	\$2,038,500	\$3,343,300	\$4,015,000

San Juan County has no commercial agricultural production.

\*preliminary and excluding beef cattle and sheep

\*\*includes dry beans, rye, hay, potatoes, oats, broomcorn, fruits, vegetables, and sugar beets.

SOURCE: 1949 and 1959 data are from Local Area Statistics, Bureau of Business Research, University of Colorado, Boulder, 1962.

1969 data are from 1971 Colorado Agricultural Statistics, Colorado Department of Agriculture.

1972 data are from Colorado Agricultural Statistics, (1972 preliminary, 1971 Final), Colorado Department of Agriculture.



grain, and corn silage. Except for the fact that some small grain is exported from the project area, most of the irrigated crops are fed to local livestock.

The irrigated land is the most productive, and also the most appealing to man's eye. Its demand by urban developers causes a decrease in available cropland annually. The 261,000 acres of dry cropland is less appealing, yet limited amounts in selected areas are being subdivided.

Dry beans and winter wheat are principal export crops in the San Juan Basin. Dry beans are a profitable crop for some 100,000 acres within the project area. Their demand exceeds the supply; however, the situation isn't without its problems. Acreage is limited by disease and by necessary crop rotation. The soils which are frequently cropped in beans are low in organic matter. These soils are also very susceptible to wind and water erosion... The Bureau of Reclamation (U.S. Department of Interior) is now in the process of planning the Dolores and Animas-La Plata irrigation Development projects. When these projects are completed, additional acreage now used as dry cropland will be brought under irrigation. Colorado State University, in cooperation with the Bureau of Reclamation, is determining better methods of irrigation water management through research. "\*\*

Although the following quote refers specifically to Montezuma and Dolores counties, it reflects the general regional situation. "The value of land and buildings has increased nearly twelve times since 1945 with a per acre increase of 7 times in value of land and buildings. A portion of this increase must be attributed to inflation during the period but by far the largest share of increase has come from a continually increasing level of capital investment...

Agriculture in the area is presently experiencing problems common to agriculture everywhere. With increased mechanization, the investment in land and equipment necessary to establish a competitive operation is prohibitive. Some estimates place the needed capital expenditure at \$200,000 for a farm which is capable of \$20,000 gross annual sales. This size operation would return a wage to the farm operator only comparable with an urban factory worker.

Because of this difficulty in entering the occupation there is... migration off the farm...on the part of the young...The average age of the farmer has increased steadily and now approaches 60 years of age. The combination of farmers growing old and new

\*San Juan Resource Conservation and Development Project Plan, 1973.



farming techniques brought about by the irrigation project [assuming construction of the Dolores River Project] will cause great changes in the agricultural sector of the economy in the next few years."\*

Refer to the following maps located in the Durango Area Office:

Colorado Land Use Commission series:

Potential for Irrigated Agriculture

Potential for Non-Irrigated Agriculture

San Juan Resource Conservation and Development Project Plan:

Water Resources

Structural Project Measures

Cropland and Vegetative Cover

#### G. References

Refer to the following sections of this profile for discussion of other economic sectors:

- /2.5/ Wholesale and Retail Trade  
Finance, Insurance, and Real Estate  
Services
- /2.8/ Agriculture-Livestock  
Mining  
Lumber Manufacturing  
Recreation and Tourism
- /3.1/ Transportation
- /3.2/ Communication
- /3.3/ Utilities
- /4.1/ Governmental Service Offices

\*Economic Base Study-Montelores Sub-Region, Joseph Andrus (WICHE), 1972.



### A. Range Livestock

Livestock, as a part of the agricultural sector, is a mainstay of the region's economy. "Fortunately most of the project area is well suited to livestock production, enabling many crops to be marketed through the local calf crop. Additionally, the strong demand for feeder cattle by feedlots in Colorado and surrounding states makes it more economical to transport calves out of this geographically-isolated basin than to export the crops.

Limited summer grazing also affects area livestock production, consequently, ranchers are producing more corn silage and buying winter ranges farther south. In both instances, less cropland is required for producing winter feed. This permits the conversion of more acreage to irrigated pasture, thus lessening the grazing pressure on native ranges."\*

Table 39 indicates that the livestock industry is declining in importance in Archuleta County, while rising in Dolores, La Plata, and, to a lesser extent, Montezuma Counties. San Juan County lacks any large agricultural operations, although numbers of livestock have begun to increase here also. Value of production data represent gross sales without consideration of operational expenditures. Number of livestock farms and ranches is a count of operations with gross sales at or above \$2,500, over half of which is attributable to livestock.

### B. Lumber

"Approximately 2,490,606 acres or 51 percent of the project area is classified as forest land. Of this acreage, 1,488,348 is designated as commercial forest, with Ponderosa pine and Englemann spruce comprising the principal commercial species. Others include Subalpine fir, White fir, Douglas fir, Blue spruce, aspen, and cottonwood. The non-commercial area, which represents approximately 1,002,588 acres, is largely pinon pine and junipers. It is used primarily for grazing, with some harvesting of fence posts, Christmas trees, and firewood. Some areas containing commercial species are classed as non-commercial due to low site quality, poor stocking, or other factors. The majority of the forest land is administered by the Federal Government (63 percent by the U.S. Forest Service and 14 percent by the Bureau of Land Management and National Park Service); about 11 percent is Indian land; the balance is either privately-owned (11percent) or state owned (1percent).

Forested lands are often involved in subdivision tracts sold for recreational purposes. New owners often are reluctant to harvest or thin any timber from their recreational land causing stands to become stagnant and disease-ridden. Even among long-established rural forest landowners, there is a lack of interest in forest management. A program providing for forest management incentives and some type of forestry legislation - such as a



TABLE 39: LIVESTOCK

	ARCHULETA	DOLORES	LA PLATA	MONTEZUMA
<u>Beef Cattle:</u>				
% change in # (1964-1969)	-51.6%	22.2%	19.1%	2.9%
# (1969)	13,926	3,174	23,968	15,324
# (1972)	10,500	6,500	42,500	31,500
Total Feed - AUM (1969)	89,256	50,376	443,172	359,388
BLM Feed - AUM (1969)	542	2,864	1,521	9,795
<u>Hogs:</u>				
# (1969)	1,268	382	2,412	929
# (1972)	800	400	1,900	1,100
<u>Sheep:</u>				
% change in # (1964-1969)	-61.7%	41.3%	-51.2%	0.9%
# (1969)	4,339	2,343	16,916	22,397
# (1972)	3,800	7,900	15,000	18,000
Total Feed - AUM (1969)	12,538	9,322	54,014	72,674
BLM Feed - AUM (1969)*	248	1,311	696	4,483
<u>Summary (1969):</u>				
Value of production -				
Beef Cattle	\$2,296,000	\$466,000	\$3,897,000	\$1,902,000
Value of production -				
Hogs and Sheep	\$ 140,000	\$ 4,000	\$ 483,000	\$ 455,000
Combined Value of				
production	\$2,436,000	\$470,000	\$4,380,000	\$2,357,000
# Livestock farms & ranches	64	27	268	199
% BLM All Feed	0.8%	6.9%	0.4%	3.2%

\* prorated on basis of BLM land ownership distribution



# LIVESTOCK (cont.)

	SAN JUAN	REGION #9	COLORADO
<u>Beef Cattle:</u>			
% change in # (1964-1969)	--	-0.5%	22.0%
# (1969)	--	56,392	3,179,786
# (1972)	1,000	92,000	3,610,000
Total Feed - AUM (1969)	--	942,192	34,827,348
BLM Feed - AUM (1969)	2,526	17,248	468,826
<u>Hogs:</u>			
# (1969)	--	4,991	434,580
# (1972)	--	4,200	340,000
<u>Sheep:</u>			
% change in # (1964-1969)	--	-12.1%	-1.8%
# (1969)	--	45,995	1,587,511
# (1972)	5,900	50,600	720,000
Total Feed - AUM (1969)	--	148,548	3,493,982
BLM Feed - AUM (1969)*	1,156	7,894	215,964
<u>Summary (1969):</u>			
Value of production -			
Beef Cattle	--	\$8,561,000	\$742,477,000
Value of production -			
Hogs and Sheep	--	\$1,082,000	\$ 62,254,000
Combined Value of			
production	--	\$9,643,000	\$904,731,000
# Livestock farms & ranches	--	558	11,142
% BLM All Feed	--	2.2%	1.7%

\* prorated on basis of BLM land ownership distribution

SOURCE: 1969 data are from BLM Social-Economic Data System, 1970. 1971 and 1972 data are from Colorado Agricultural Statistics, Colorado Department of Agriculture, 1973.



forest cropland act - are needed to improve management on private land.

An inventory of private forest land and each owner's interest in utilizing his land would be a valuable aid in (a) determining the actual condition of forest land in the private sector, (b) the amount of private forest available for use by wood industries, (c) the type of information and education needed and (d) priorities for giving forestry assistance.

Improper timber harvesting not only has an adverse effect on the aesthetics of the area, but it damages the watershed, increases the fire hazard, and sets back timber production for many years. Planned cutting of wood crops under a properly administered harvesting system will improve the health and appearance of forest land. Careful cutting will open the forest floor to more sunlight, thereby improving the amount and quality of grazing, increase tree growth, and increase water production."\*

Major difficulties experienced by the lumber industry are distance to markets, high harvesting costs (due to rugged mountain terrain and environmentally beneficial cutting techniques), and the seasonal nature of the work. Wood processing plants are in operation in Archuleta, La Plata, and Montezuma Counties. Table 40 describes lumber sales in 1969.

### C. Mining

Mining constituted an initial stimulus for the settlement of the San Juan Basin and continues to be part of the economy. The fluctuations in the activity of this industry still have short-term effects, but overall, mining is declining in importance. This is in part due to the fact that the highest grade and most readily accessible resources already have been extracted, leaving the lower grade minerals for a time when need exceeds the costs of extraction and refinement. Map 4 locates the mineral resources of the region. At present, mining explorations are increasing, but whether or not these will be followed with actual extraction is yet to be seen. Federal lands are particularly subject to investigation due to the ease with which a mining company may obtain authority to set up operations. (This results from a mining act passed in 1872 which is still providing directives to federal agencies).

Table 41 discusses fossil fuel production in the region, including the extent of current federal leases. Figures on federal leases connected with sand and gravel or metal mining operations were not found. Value of mineral production is shown in Table 42. Production of fossil fuels (especially natural gas) is particularly high in La Plata County as is metal mining in San Juan County.



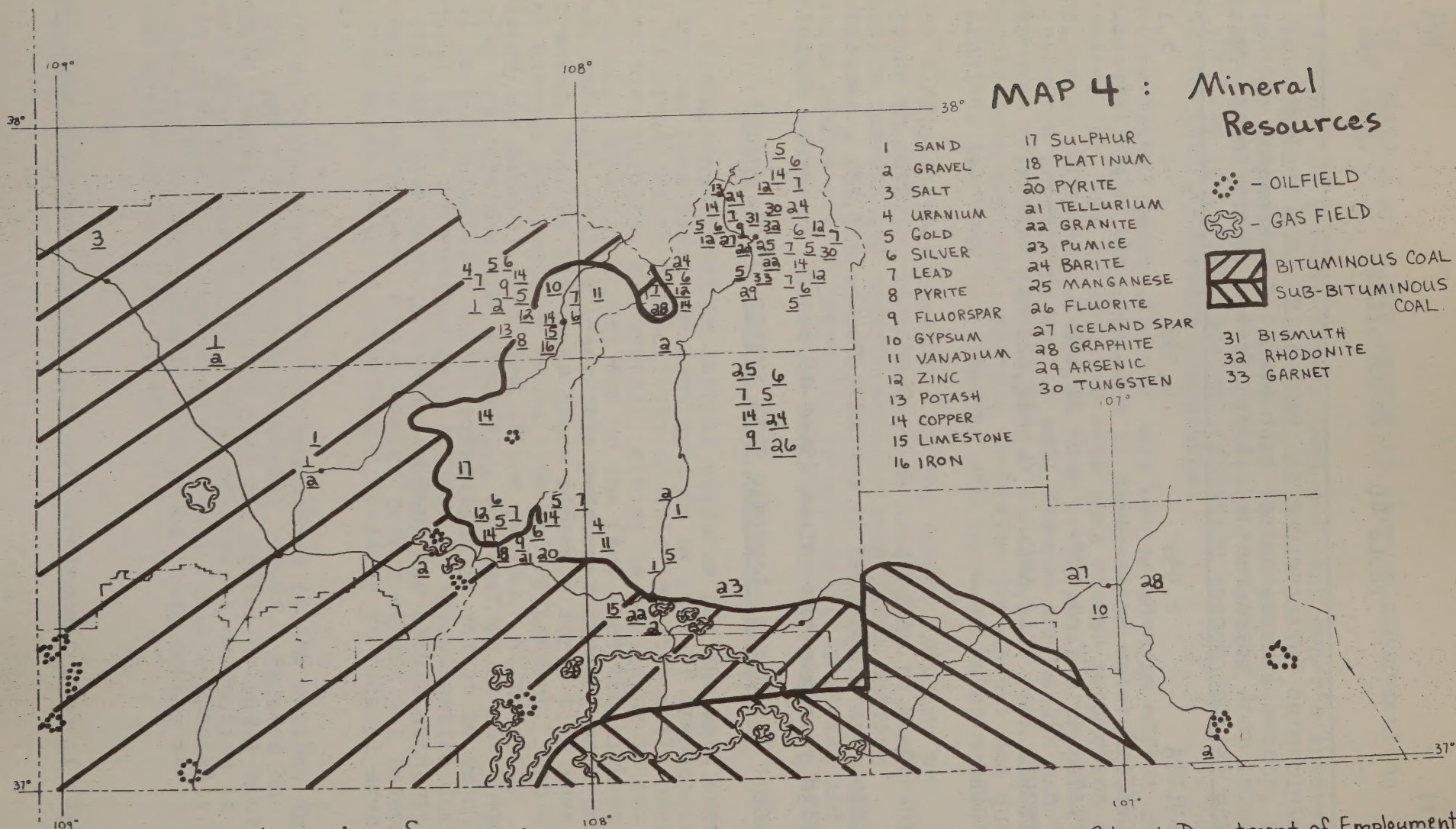
TABLE 40: LUMBER SALES

	TOTAL VOLUME (thousands of board feet)	SAW MILLS (thousands of board feet)	BLM VOLUME* (thousands of board feet)	% of Total
ARCHULETA	8,954	6,588	1	7.1
DOLORES	--	--	37	--
LA PLATA	34,357	28,442	199	.6
MONTEZUMA	16,610	12,221	41	.2
SAN JUAN	--	--	--	--
REGION #9	59,921	47,251	278	.5
COLORADO	309,312	227,574	5,261	1.7

\* five year average volume (1968-1972)

SOURCE: BLM Social-Economic Data System, 1970.





SOURCE: LOCAL AREA STATISTICS,  
prepared for the Resources and Community Development Division of the Colorado Department of Employment  
by Bureau of Business Research, University of Colorado, 1961.



TABLE 41: FOSSIL FUELS - 1972 PHYSICAL PRODUCTION

	OIL (Barrels)		GAS (Million Cubic Feet)		COAL (Tons)	
	Total	Production from Federal Leases	Total	Production from Federal Leases	Total	Production from Federal Leases
ARCHULETA	56,568	0	20,956	0	0	0
DOLORES	138,852	16,900	396,600	11,510	0	0
LA PLATA	25,784	0	27,257,949	0	11,370	7,261
MONTEZUMA	221,780	77,935	698,985	410,259	0	0
SAN JUAN	0	0	0	0	0	0
REGION #9	442,984	94,835	28,374,490	421,769	11,370	7,261
COLORADO	32,015,107		125,992,570		562,624	

SOURCE: Ed Parsons, Colorado State Office, 1974.



TABLE 42: VALUE OF MINERAL PRODUCTION

	ARCHULETA		DOLORES		LA PLATA		MONTEZUMA	
	1972	1970	1972	1970	1972	1970	1972	1970
Oil	\$200,816	\$153,398	\$492,925	0	\$91,533	\$66,849	\$787,319	\$797,148
Gas	3,563	5,341	67,422	0	4,633,851	4,628,890	118,827	134,524
Coal	0	0	0	0	69,357	135,495	0	0
Sub- Total	\$204,379	\$158,639	\$560,347	0	\$4,794,741	\$4,831,234	\$906,146	\$931,672
Gold	0	0	12,792	6,610	0	0		
Silver	0	0	146,741	194,735	0	0	0	0
Copper	0	0	183,486	139,118	0	0	0	0
Lead	0	0	56,123	418,479	0	0	0	0
Zinc	0	0	75,406	488,066	0	0	0	0
Cadmium	0	0	0	44,066	0	0	0	0
Sub- Total	0	0	\$474,548	\$1,291,014	0	0	0	0
Sand & Gravel	214,211	59,104	0	123,982	698,947	308,900	422,141	1,205,684
Total	\$418,590	\$217,743	\$1,034,895	\$1,414,996	\$5,493,688	\$5,140,134	\$1,328,287	\$1,205,684



VALUE OF MINERAL PRODUCTION (cont.)

	SAN JUAN		REGION #9		COLORADO	
	1972	1970	1972	1970	1972	1970
Oil	0	0	\$1,572,393	\$1,017,395	\$113,653,630	\$80,060,687
Gas	0	0	4,823,663	4,768,655	21,411,081	17,634,935
Coal	0	0	69,357	135,495	33,734,093	34,320,056
Sub- Total	0	0	\$6,465,413	\$5,921,545	\$168,798,804	\$132,015,678
Gold	\$1,635,936	\$571,595	\$1,648,728	\$578,205	\$3,631,921	\$1,357,460
Silver	507,052	600,130	653,793	794,865	5,540,031	5,557,043
Copper	0	710,620	183,486	849,738	3,548,619	4,332,548
Lead	1,648,489	2,250,320	1,704,612	2,668,799	7,935,735	6,670,405
Zinc	3,126,703	2,928,268	3,202,109	3,416,334	15,338,235	11,913,840
Cadmium	0	233,522	0	277,588	0	671,840
Sub- Total	\$6,918,180	\$7,294,445	\$7,392,728	\$8,585,529	\$35,994,541	\$30,503,099
Sand & Gravel	0	0	1,335,299	765,998	36,966,358	26,714,822
Total	\$6,918,180	\$7,294,445	\$15,193,440	\$15,273,072	\$406,297,848	\$371,883,497

SOURCE: A Summary of Mineral Industry Activities in Colorado, Colorado Division of Mines, 1970 and 1972.



#### D. Dependency on Public Lands

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As has been shown, important sectors of the economy of the San Juan Basin involve the area's natural resources. These resources (range land, timber, minerals, and open space for recreation) are all available on the public lands of the region. Table 43 represents a series of calculations designed to measure the extent to which these economic sectors are dependent upon public lands, particularly those managed by BLM. The dependency of fossil fuels seems especially high. As is noted in the table, these calculations were based on all federal leases, while livestock and lumber were considered only for dependency on BLM. BLM manages only a small portion of the federal lands in the region.

#### E. Recreation and Tourism

Recreation and tourism are looked upon with high hopes by many concerned with the economic development of the region. The summer tourist trade is now a vital segment of the economy. Winter activities (such as skiing) are being developed to provide a more stable, year-round economic base. This sector, although resource-based, is not included in Table 43 due to lack of uniform documentation. Further investigation should develop, and encourage other sources to develop, quantitative information on recreation and tourism, particularly use data and income values.

This sector involves many facets of the region: its National Forest, Wilderness, and other public areas (including BLM land); and reservoirs; archeological sites; historical mining activities; winter skiing opportunities; and wildlife. Table 44 addresses fifty-six outdoor recreation activities as sampled by the Colorado Division of Parks and Recreation. It should be noted that a listing of 'zero use' for an activity indicates that no one in the sample participated in that particular activity. This does not infer, for example, that absolutely no one snowmobiles on trails or snowshoes in open space. For responses to a 1972 Fishery Questionnaire, refer to the publication by the Colorado Division of Wildlife. Region #9 accounted for seven percent of all angling days in the State. Table 45 speaks to the use of San Juan National Forest in general and to its use for winter sports in particular. Table 46 discusses the history of visitation in Mesa Verde National Park, while Table 47 points to the summer as the Park's peak period.

The Denver and Rio Grande Western Railroad operates an extremely popular dead end narrow-gauge line up the scenic Animas River Valley between Durango and Silverton. Table 48 indicates an almost continuous increase in number of passengers per year since 1947. Much of Silverton's retail trade is dependent upon these summer runs. Recently, the D & RGW considered shortening the layover time in that town, but public hearings by Silverton residents resulted in prohibition of such an event.



TABLE 43: REGION #9 RESOURCE INDUSTRY ANALYSIS SUMMARY

	Livestock	Lumber	Fossil Fuels (1972) <sup>1/</sup>		
			Oil	Gas	Coal
Quantity of Regional Production	1,090,740 (AUM's) <sup>2/</sup>	59,921 (MBF) <sup>2/</sup>	442,984 (BBLs) <sup>4/</sup>	28,374,490 (MCF) <sup>5/</sup>	11,370 (TONS)
Value of Regional Production	\$9,643,000	not available	Total: \$6,465,413		
			\$1,572,393	\$4,923,663	\$69,357
			24.3% of total	74.6% of total	1.1% of total
Total Regional Income	\$3,650,000	\$723,000	Total: \$727,000		
			\$176,661	\$542,342	\$7,997
			24.3% of total	74.6% of total	1.1% of total
Regional Income Index <sup>6/</sup>	1.00 <sup>7/</sup>	1.25	1.20 <sup>8/</sup>		
BLM Resource Significance:					
Amount Produced	25,142 (AUM's)	278 (MBF)	94,835 (BBLs)	421,769 (MCF)	7,261 (TONS)
Regional Industry Dependency <sup>2/</sup>	2.4%	0.5%	21.4%	1.5%	63.9%
Direct Income Effect	\$3.48/ AUM	\$13.00/ MBF	40¢/ BBL	2¢/ MCF	70¢/ TON
-Total <sup>10/</sup>	\$87,600	\$3,615	\$37,806	\$8,135	\$5,110
Industry Income Multiplier	1.568	1.497	1.533		
Regional Income Effect <sup>11/</sup>	\$137,357	\$5,412	\$57,957	\$12,471	\$7,833
Regional Income Dependency <sup>12/</sup>	3.67%	0.75%	32.8%	2.3%	97.9%

(footnotes on next page)



1/ Significance calculated for all Federal Lease production as opposed to simply BLM production (due to available data)

2/ Animal Unit Months

3/ Thousand Board Feet

4/ Barrels

5/ Million Cubic Feet

6/ 
$$\text{Income Index} = \frac{\% \text{ Regional Income (by sector)}}{\% \text{ Regional Employment (by sector)}}$$

7/ This Index was computed for all of the Agriculture sectors since employment is not broken out for a range livestock sector.

8/ This Index was computed for all of the Mining sector since employment is not broken out for a fossil fuels sector.

9/ 
$$\text{Regional Industry Dependency} = \frac{\text{Amount Produced on BLM}}{\text{Quantity of Regional Production}}$$

10/ Total Direct Income Effect = Regional Industry Dependency  $\times$  Total Regional Income

11/ Regional Income Effect = Total Direct Income Effect  $\times$  Industry Income Multiplier

12/ 
$$\text{Regional Income Dependency} = \frac{\text{Regional Income Effect}}{\text{Total Regional Income}}$$

SOURCE: Tables 27, 35, 39, 40, and 41.



TABLE 44 :  
OUTDOOR RECREATION USE INVENTORY (by Activity Days)

Activity	Resident	<u>Non-resident</u>		Region #9 Total	Colorado Total
		Auto	Air		
Hiking across open country	410,185	115,956	455,394	455,394	15,359,899
Hiking on Trails	539,716	639,904	151,798	1,331,419	23,665,716
Hiking on roads or sidewalks	1,036,256	73,009	0	1,109,265	53,933,564
Horseback Riding Along roads	0	8,589	0	8,589	1,985,313
Horseback Riding on Trails	172,709	146,018	30,360	349,087	7,582,774
Horseback Riding across Open Country	1,370,880	141,724	212,517	1,725,121	10,278,922
Bicycling on trails or Paths	0	0	0	0	1,273,007
Bicycling across open country	0	0	0	0	1,232,479
Bicycling on roads or sidewalks	1,446,440	12,884	0	1,459,324	92,370,038
Motorcycling on Roads	21,589	8,589	0	30,178	4,183,013
Motorcycling on Trails	21,589	0	0	21,589	4,217,601
Motorcycling across Open Country	75,560	0	0	75,560	2,530,136
Driving for fun on regular roads	734,014	1,387,175	349,135	2,470,325	64,308,444
Driving for fun in park or recreation areas	237,475	1,215,389	182,157	1,635,022	27,846,955
4-wheeling on trails or 4-wheel roads	172,709	163,197	455,394	791,300	5,524,566



Activity	Resident	Non-resident		Region #9 Total	Colorado Total
		Auto	Air		
4-wheeling on regular roads	172,709	163,197	455,394	791,300	5,524,566
4-wheeling in the open or cross country	0	55,831	0	55,831	1,828,858
Technical mountain climbing with ropes	0	8,589	0	8,589	1,153,485
Swimming-lake	10,794	0	30,360	41,154	3,004,582
Swimming-pools	161,915	137,429	0	299,344	32,267,046
Swimming-streams	528,922	4,295	0	533,217	1,869,535
Picnicking at Picnic Areas	194,298	588,368	30,360	813,026	17,018,761
Picnicking in open space	107,943	141,724	75,899	325,566	9,967,959
Camping in a campground	259,064	1,013,540	0	1,272,604	20,847,631
Camping in open space	0	64,420	0	64,420	7,187,307
Camping in group camp	0	34,357	0	34,357	1,916,412
Boating-Waterski	192,709	0	0	172,709	1,918,808
fast-power boating	0	0	0	0	779,365
slow-power boating	0	17,179	0	17,179	489,578
sailing	0	0	0	0	317,100
canoeing or rafting in streams	0	0	0	0	458,774
canoeing or rafting in lakes	0	0	0	0	486,341



Activity	Resident	Non-resident		Region #9 Total	Colorado Total
		Auto	Air		
Game playing on playground equipment	194,298	90,188	0	284,486	15,794,337
Game Playing on marked fields	151,121	8,589	0	159,710	15,836,309
Game Playing in open space	172,709	30,063	0	202,772	13,012,193
Tennis	10,794	0	0	10,794	9,670,752
Golfing	10,794	34,357	0	45,152	8,335,010
Miniature Golf	0	25,768	0	25,768	1,114,229
Stream fishing	259,064	85,893	227,697	572,654	13,276,527
Lake Fishing (from shore)	269,858	64,420	0	334,278	15,328,537
Lake Fishing (from boat)	194,298	8,589	0	202,887	2,827,578
Ice Fishing	0	8,589	0	8,589	205,249
Any type of Hunting	64,766	292,037	30,360	387,162	4,498,543
Trap, skeet shooting	0	8,589	0	8,589	387,830
Other target shooting	53,972	0	45,539	99,511	746,761
Downhill skiing	161,915	94,483	0	256,397	18,106,521
Cross country skiing on trails	0	0	0	0	1,930,354
Cross country skiing in open space	0	0	0	0	1,160,446



Activity	Resident	Non-resident		Region #9 Total	Colorado Total
		Auto	Air		
Snowmobiling on trails	0	0	0	0	406,138
Snowmobiling in open space	129,532	0	0	129,532	1,455,047
Snowshoeing on trails	0	0	0	0	116,780
Snowshoeing in open space	0	0	0	0	352,546
sledding, tobogganing, tubing	43,177	0	0	43,177	4,747,662
ice skating on lake or stream	0	8,589	0	8,589	811,912
ice skating on a rink	0	0	0	0	2,674,798
other activities	129,532	407,993	0	841,120	21,692,889

SOURCE: Interim Colorado Comprehensive Outdoor Recreation Plan, Colorado Division of Parks and Outdoor Recreation, 1974.



TABLE 45 :

SAN JUAN NATIONAL FOREST  
RECREATIONAL AND WINTER SPORTS USE

Year	Amount of Use, Total Visitor Days (000's)	Amount of Winter Sports Use, Total Visitor Days (000's)	Winter Sports As A Per- cent of Total
1965	1,159.2	19.6	1.7
1966	813.8	8.6	1.1
1967	796.1	40.5	5.1
1968	895.1	16.9	1.9
1969	1,055.5	26.9	2.6
1970	1,157.4	22.1	1.9
1971	1,301.7	28.6	2.2
1972	1,472.8	44.6	3.0

SOURCE: Colorado Ski and Winter Recreation Statistics, Charles R. Goeldner and Gerald Allen, Business Research Division, Graduate School of Business Administration, University of Colorado, 1973.



TABLE 46:  
TRAVEL STATISTICS FOR MESA VERDE NATIONAL PARK-  
YEARLY TOTALS (IN # OF PEOPLE)

1956	186,808
1957	193,927
1958	201,345
1959	217,357
1960	225,708
1961	227,658
1962	262,250
1963	325,306
1964	344,444
1965	378,278
1966	423,366
1967	434,983
1968	449,762
1969	513,771
1970	527,207
1971	518,462
1972	546,286
1973	482,851

SOURCE: Ranger's Office at Mesa Verde National Park.



TABLE 47:

TRAVEL STATISTICS FOR MESA VERDE NATIONAL PARK-  
MONTHLY TOTALS (IN # OF PEOPLE)

	1973	1974
January	2,369	346
February	2,013	477
March	5,242	3,188
April	10,321	10,683
May	37,278	39,988
June	97,609	80,519
July	122,566	86,667
August	124,109	
September	51,202	
October	21,655	
November	6,718	
December	1,769	

SOURCE: Ranger's Office at Mesa Verde National Park.



TABLE 48: DURANGO - SILVERTON TOURIST TRAIN

YEAR	NUMBER OF PASSENGERS
1947	3,444
1948	2,814
1949	1,882
1950	4,445
1951	2,424
1952	4,911
1953	12,264
1954	14,945
1955	20,352
1956	23,845
1957	24,699
1958	32,334
1959	35,588
1960	35,871
1961	37,711
1962	37,855
1963	50,988
1964	65,187
1965	71,203
1966	not available
1967	83,410
1968	85,462

SOURCE: Comprehensive Plan (preliminary). La Plata County, Animas Regional Planning Commission, 1971.



Table 49 indicates an increase of 234 percent in Purgatory Ski Area lift ticket sales between 1966 and 1973. Purgatory is the major ski area of the region, although Telluride and Wolf Creek fall just outside region boundaries. The above use increase at Purgatory is not without nearby condominium development and accompanying increases in population density. Smaller ski areas in the region include Stoner (near Dolores), Hesperus, and Calico Hill (both near Durango). For more detailed information and discussion of economical impact, refer to Colorado Ski and Winter Recreation Statistics, 1973 published by the Business Research Division of the Graduate School of Business Administration, University of Colorado, Boulder.

Some portion of the tourist industry stems directly from hunters attracted to the area's wildlife in the fall seasons. 1972 harvests of deer, elk, and bear are delineated in Table 50.

The impact of tourism on consumption patterns is discussed more fully in section /2.5/.



TABLE 49 :

## PURGATORY LIFT TICKET SALES

Season	Sales	% Change
1966-1967	34,091	--
1967-1968	38,174	12.0
1968-1969	39,666	3.9
1969-1970	49,001	23.5
1970-1971	64,077	30.8
1971-1972	73,514	14.7
1972-1973	113,858	54.9
1966-67 to 1972-73		234.0

SOURCE: Colorado Ski and Winter Recreation Statistics, Charles R. Goeldner and Gerald Allen, Business Research Division, Graduate School of Business Administration, University of Colorado, 1973.



TABLE 50 : BIG GAME HARVEST

	Total			Male	Adults		Female	Adults		Young		
	T *	R**	NR***	T	R	NR	T	R	NR	T	R	NR
<u>Archuleta</u>												
Deer, total	1,000	306	694									
, by conventional means	992	304	688	981	304	677	11	0	11	0		
, by archery	8	2	6	8	2	6	0			0		
Elk, total	2,063	956	1,107									
, by conventional means	2,053	954	1,099	1,237	438	799	688	436	252	128	80	48
, by archery	10	2	8	4	0	4	6	2	4	0		
Bear, total	15											
, by Division of Wildlife Services	0											
, by unlicensed individuals	1											
, by licensed hunters	14			8			6					
<u>Dolores</u>												
Deer, total	1,565	694	871									
, by conventional means	1,545	684	861	1,238	526	712	299	158	141	8		8
, by archery	20	10	10	14	7	7	6	3	3	0		
Elk, total	624	429	195									
, by conventional means	616	425	191	440	285	155	150	116	34	26	24	2
, by archery	8	4	4	6	4	2	2	0	2	0		
Bear, total	2											
, by Division of Wildlife Services	0											
, by unlicensed individuals	2											
, by licensed hunters	0											
<u>La Plata</u>												
Deer, total	1,714	1,329	385									



# BIG GAME HARVEST (cont.)

	Total			Male Adults			Female Adults			Young		
	T	R	NR	T	R	NR	T	R	NR	T	R	NR
, by conventional means	1,693	1,323	370	1,693	1,323	370	0			0		
, by archery	21	6	15	8	2	6	13	4	9	0		
Elk, total	1,631	1,254	377									
, by conventional means	1,624	1,252	372	1,015	776	239	506	399	107	103	77	26
, by archery	7	2	5	2	2	0	5	0	5	0		
Bear, total	16											
, by Division of Wildlife Services	5											
, by unlicensed individuals	1											
, by licensed hunters	10			5			5			0		
<u>Montezuma</u>												
Deer, total	1,009	607	402									
, by conventional means	1,009	607	402	796	480	316	203	117	86	10	10	0
, by archery	0											
Elk, total	224	211	13									
, by conventional means	219	206	13	175	167	8	41	36	5	3	3	0
, by archery	5	5	0	4	4	0	1	1	0	0		
Bear, total	5											
, by Division of Wildlife Services	0											
, by unlicensed individuals	0											
, by licensed hunters	5			3			2			0		
<u>San Juan</u>												
Deer, total	56	20	36									
, by conventional means	54	18	0	54	18	36	0			0		
, by archery	2	2	0	2	2	0	0			0		
Elk, total	40	37	3									
, by conventional means	37	34	3	18	8	0	15	14	1	4	2	2



## BIG GAME HARVEST (cont.)

	Total			Male Adults			Female Adults			Young		
	T	R	NR	T	R	NR	T	R	NR	T	R	NR
, by archery	3	3	0	3	3	0	0			0		
Bear, total	2											
, by Division of Wildlife Services	2											
, by unlicensed individuals	0											
, by licensed hunters	0											
<u>Region # 9</u>												
Deer, total	5,344	2,956	2,388									
, by conventional means	5,293	2,936	2,357	4,762	2,687	2,101	513	275	238	18	10	8
, by archery	51	20	31	32	13	19	19	7	12	0	0	0
Elk, total	4,582	2,887	1,695									
, by conventional means	4,549	2,871	1,678	2,875	1,692	1,201	1,400	1,001	399	264	186	78
, by archery	33	16	17	19	13	6	14	3	11	0	0	0
Bear, total	40											
, by Division of Wildlife Services	7											
, by unlicensed individuals	4											
, by licensed hunters	29			16			13					

cont'd, next page



# BIG GAME HARVEST (cont'd):

T	Total R	NR	T	Male Adults R	NR	T	Female Adults R	NR	T	Young R	NR
<u>Colorado</u>											
Deer, total											
67,238	45,458	21,600									
, by conventional means											
66,109	45,012	21,097	50,231	32,096	18,135	14,489	11,685	2,854	1,389	1,281	108
, by archery											
1,129	536	593	946	421	525	178	113	65	5	2	3
Elk, total											
19,034	13,851	5,183									
, by conventional means											
18,821	13,720	5,101	12,885	8,948	3,937	5,010	4,037	973	926	735	191
, by archery											
213	131	82	132	86	46	72	36	36	9	9	0
Bear, total											
364											
, by Division of Wildlife Services											
44											
, by unlicensed individuals											
69											
, by licensed hunters											
251			154			97					

\*Total

\*\* Resident

\*\*\* Non-Resident

SOURCE: 1972 Colorado Big Game Harvest, Colorado Division of Wildlife, April, 1973.



## /2.9/ SOCIAL WELL-BEING AND WELFARE

Archuleta County has the largest percentage on welfare of all the county populations (followed by Montezuma and then La Plata Counties). This has been true since 1967, and in 1970 came to over 20 percent of the population. Percentages in all counties, as well as in the State, have been increasing (See Table 51 ). Table 52 exhibits Social Services expenditures, breaking them into both administrative and program costs. La Plata County, with the largest population, leads the region in these expenditures.

Tables 53 and 55 spell out expenditures and caseloads by program, with Table 54 indicating that most recipients of Aid to Families with Dependent Children in Archuleta County are Spanish-Americans. Programs with the highest expenditures in the region are Old Age Pensions, Aid to Families with Dependent Children and Aid to Dependent Children.

Funds for the Food Stamp Program (Table 56 ) come from the U.S. Department of Agriculture with the Colorado Social Services Department simply acting as a dispersing agent. These funds are not included in listings of total expenditures. Both public assistance and non-public assistance households and individuals are eligible for Food Stamps.

In 1971, La Plata and Montezuma Counties had arrived at the maximum welfare levies statutorily allowed. Whether or not they applied for 'Distressed County' funds is not known.

Refer to the Fiscal and Statistical Report of the Colorado Department of Social Services, 1972, (copy located in Durango Area Office) for further explanation of all Social Services programs, expenditures, and payments.

Table 57 shows median grade completed by persons ages 25 years and over. All counties are slightly below the State median, Dolores County having the lowest median.



TABLE 51 :  
PERCENTAGE OF POPULATION OF WELFARE

	TOTAL POPULATION*	TOTAL WELFARE POPULATION**	% OF POPULATION ON WELFARE			
			1967- 1968	1968- 1969	1969- 1970	1970- 1971
ARCHULETA	2,674	550	10.7	12.5	17.2	20.6
DOLORES	1,635	187	4.9	6.9	7.3	11.4
LA PLATA	19,362	2,640	8.0	10.2	10.9	13.6
MONTEZUMA	13,127	2,065	7.7	8.9	11.7	15.7
SAN JUAN	854	96	3.4	3.3	4.8	11.2
REGION 9	37,652	5,538	..not available....			14.7
STATE	2,264,337	211,095	6.4	6.7	7.2	9.3

\* Information received from State Planning Office.

\*\* Includes non-public assistance Food Stamp recipients and Child Welfare.

SOURCE: Fiscal and Statistical Report for the Colorado Department of Social Services, Fiscal year 1970-1971.



TABLE 5a:  
EXPENDITURES FOR SOCIAL SERVICES

	TOTAL EXPENDITURES (Excluding Medical Services)	COUNTY ADMINISTRATION EXPENDITURES	TOTAL PROGRAM EXPENDITURES (Total Monthly Caseload)*
ARCHULETA	\$257,573	\$29,273	\$228,300 (177)
DOLORES	116,542	16,467	100,075 (77)
LA PLATA	1,370,608	144,539	1,226,069 (952)
MONTEZUMA	1,081,093	103,977	977,116 (716)
SAN JUAN	27,139	8,425	18,714 (18)
REGION 9	2,852,955**	302,681	2,550,274 (1,940)***
STATE	\$130,532,698	\$18,121,401	\$112,411,297 (74,167)

\* Excludes Child Welfare and Medical Services

\*\*Region 9's total expenditure was 2.2% of the State total

\*\*\* 2.6% of State total average monthly caseload

SOURCE: Fiscal and Statistical Report for the Colorado  
Department of Social Services, Fiscal year 1970-1971.



TABLE 53 :

EXPENDITURES AND AVERAGE MONTHLY CASELOAD\* For  
AID TO FAMILIES WITH DEPENDENT CHILDREN

	TOTAL AID TO FAMILIES WITH DEPENDENT CHILDREN	AID TO DEPENDENT CHILDREN	AID TO DEPENDENT CHILDREN-- UNEMPLOYED PARENTS	WORK INCENTIVE PROGRAM
ARCHULETA AMC	\$ 66,481 36	\$ 53,464 31	--	\$ 13,017 5
DOLORES AMC	\$ 31,388 18	\$ 20,119 11	\$ 2,207 1	\$ 9,062 6
LA PLATA AMC	\$ 382,759 184	\$ 291,333 149	\$ 19,231 7	\$ 72,195 28
MONTEZUMA AMC	\$ 394,728 190	\$ 294,294 149	\$ 21,111 9	\$ 79,323 32
SAN JUAN AMC	\$ 10,727 6	\$ 10,727 6	--	--
REGION #9 AMC	\$ 886,083 434	\$ 669,937 346	\$ 42,549 17	\$ 173,597 71
COLORADO AMC	\$56,047,600 25,399	\$46,793,583 22,213	\$ 2,859,290 979	\$ 6,394,727 2,207

\*AMC

SOURCE: Fiscal and Statistical Report for the Colorado Department of Social Services,  
Fiscal Year 1970 - 1971.



TABLE 54 :

ETHNIC ORIGIN OF RECIPIENTS OF  
AID TO FAMILIES WITH DEPENDENT CHILDREN\*

	TOTAL	SPANISH- AMERICAN	OTHER WHITE	NEGRO	AMERICAN INDIAN	UNKNOWN
ARCHULETA	139	114	25	--	--	--
DOLORES	54	--	50	--	4	--
LA PLATA	824	534	261	10	18	1
MONTEZUMA	858	294	530	--	29	2
SAN JUAN	31	18	13	--	--	--
REGION #9	1,906	963	876	10	51	3
COLORADO	107,787	46,887	44,835	14,493	498	809

\*receiving monthly payments during June, 1971

SOURCE: Fiscal and Statistical Report for the Colorado Department of Social Services, Fiscal Year 1970-1971.



TABLE 55:

## EXPENDITURES &amp; AVERAGE MONTHLY CASELOAD\* FOR OTHER SOCIAL SERVICES PROGRAMS

	OLD AGE PENSION	AID TO NEEDY DISABLED	GENERAL ASSISTANCE	DAY CARE	CHILD WELFARE SERVICES	AID TO THE BLIND	TUBERCULOSIS ASSISTANCE
ARCHULETA AMC	\$ 139,076 122	\$ 11,516 16	\$ 1,184 2	\$ 487	\$ 9,003	\$ 438 1	\$ 115 >1
DOLORES AMC	\$ 60,799 53	\$ 3,909 6	\$ 49 >1	\$ 1,668	\$ 2,262	\$ --	\$ --
LA PLATA AMC	\$ 670,222 656	\$ 100,195 103	\$ 10,974 4	\$ 11,287	\$ 45,986	\$ 3,132 3	\$ 1,514 2
MONTEZUMA AMC	\$ 470,566 449	\$ 57,115 68	\$ 10,633 8	\$ 13,766	\$ 29,174	\$ 560	\$ 564 1
SAN JUAN AMC	\$ 5,504 8	\$ 2,321 3	\$ 162 1	\$ --	\$ --	\$ --	\$ --
REGION #9 AMC	\$ 1,346,167 <sup>1/</sup> 1,288	\$ 175,056 <sup>2/</sup> 196	\$ 23,002 15	\$ 27,218	\$ 86,425 <sup>3/</sup>	\$ 4,130 <sup>4/</sup> 4	\$ 2,193 3
COLORADO AMC	\$ 34,316,608 36,681	\$ 10,732,159 10,767	\$ 1,592,128 974	\$ 2,839,274	\$ 5,848,740	\$ 252,671	\$ 174,836

\*AMC

- 1/ 3.9% of Old Age Pension state total expenditures  
 2/ 1.63% of total state Aid to Needy Disabled expenditures  
 3/ 1.5% of state total for Child welfare expenditures  
 4/ 1.63% of state total for Aid to the Blind expenditures  
 5/ 5.0% of Old Age Pension state caseload

SOURCE: Fiscal and Statistical Report for the Colorado Department of Social Services,  
Fiscal Year 1970-1971.



TABLE 56 :

## FOOD STAMPS

	POPULATION	Average # of HOUSEHOLDS PARTICIPATING	Average # of PERSONS PARTICIPATING	TOTAL SALES (includes bonuses)
ARCHULETA	2,674	96	405	\$ 115,876
DOLORES	1,635	45	123	\$ 37,368
LA PLATA	19,362	411	1,549	\$ 448,264
MONTEZUMA	13,127	384	1,338	\$ 401,125
SAN JUAN	854	22	73	\$ 23,125
REGION #9	37,652	958	3,488	\$ 1,025,758
COLORADO	2,264,337	37,098	127,760*/	\$37,485,155**/

\*/ 5.7% of Colorado total population

\*\*/ an increase of 96.4% over fiscal year 1969- 1970, due to certain changes in the program: 1) more coupons for income level; 2) wider eligibility; 3) bonus increases; 4) general liberalization of regulations; 5) wider publicity about the program.

SOURCE: Fiscal and Statistical Report for the Colorado Department of Social Services, Fiscal Year 1970-1971.



TABLE 57:

MEDIAN GRADE COMPLETED  
(PERSONS 25 YEARS AND OVER)

ARCHULETA	11.4
DOLORS	10.8
LA PLATA	12.3
MONTEZUMA	11.8
SAN JUAN	12.3
COLORADO	12.4

SOURCE: U.S. Census, General Social and Economic Characteristics, 1970.



## /2.10/ SOCIO-CULTURAL RESOURCES

The San Juan Basin is basically a rural area. Consequently, cultural activities are less numerous and diverse than those found in more urban areas like the Front Range. This does not mean, however, that no cultural activities exist or that they are all of any one type.

Public libraries are located in Durango, Cortez, Bayfield, Pagosa Springs, Dolores, and Silverton. These libraries are often city-funded and partially dependent upon grants to increase the number of books and other circulation materials available to area residents. More funds could be used.

Other cultural activities within the region include women's clubs, fireman's balls, movie theaters, dance classes, melodramas and other drama groups, historical societies, genealogical clubs, county fairs, and fiestas. Social organizations, such as the American Legion and the Masons, are widespread. Churches of the region are listed in Table 58.

This year Silverton is celebrating its centennial (1874-1974) through the sponsoring of such activities as mining events, including two-man drilling and one-man mucking contests. Fort Lewis College in Durango is a cultural center offering speakers, films, and concerts. Durango has its own symphony orchestra.

Pino Nuche on the Southern Ute Indian Reservation is a community center for an Indian population attempting to preserve and enhance intrinsic cultural values.



TABLE 58: CHURCHES

ARCHULETA

Assembly of God  
Church of Jesus  
Community United Methodist Church  
First Baptist Church  
Mountain View Baptist Mission

DOLORES

First Baptist Church  
First Southern Baptist Church  
Full Gospel Revival Center  
Methodist Church

LA PLATA

Assembly of God Church  
Bible Missionary Church  
Calvary Presbyterian Church  
Christ the King Lutheran Church  
Christian Science Reading Room  
Church of Christ  
Church of Jesus Christ of Latter-Day Saints  
Church of the Nazarene  
Community Presbyterian Church  
Durango Christian Church  
First Assembly of God Church  
First Baptist Church of Durango  
First Church of Christ Scientist  
First Methodist Church  
First Presbyterian Church  
First Southern Baptist Church  
Foursquare Gospel Church  
Hesperus Southern Baptist Mission  
Latter Day Saints Church  
Sacred Heart Catholic Church  
St. Columba's Catholic Church  
St. Mark's Catholic Church  
St. Paul's Lutheran Church  
Seventh Day Adventist

MONTEZUMA

Arriola Baptist Church  
Church of Christ  
Church of First Born  
Church of Jesus Christ of Latter Day Saints  
First Assembly of God Church  
First Baptist Church  
First Southern Baptist Church  
Four Corners United Parish  
Spanish Assembly of God Church

SAN JUAN

Church of Christ  
Silverton Baptist Church



The attitudes and values of the group of people residing within a given region are difficult to pinpoint, particularly on the basis of a short-term acquaintance. It can be generally observed, however, that people see various manifestations of restriction of personal freedoms by economically- and governmentally-controlled situations. Land use is a prime example. The people of this region are only beginning to think in terms of social goals for the future and alternative implementations of such. Interest groups conflict (at least, philosophically) over priorities. But also, cooperation is exemplified in the essential services of the volunteer emergency medical technicians.

In spite of the confusion so often connected with current living, felt even in the less-rapid pace of this rural area, positive attitudes seem prevalent. Also deeply felt is an appreciation of the natural setting of the alpine and mesa areas.

BLM public meeting should reveal current attitudes and values relevant to land management in the region.



### /3.0/ INFRASTRUCTURE AND SOCIAL SUPPORT SYSTEMS

#### /3.1/ TRANSPORTATION

##### A. Highways

At present, the highways of the San Juan Basin are its primary transportation routes both within the region and into and out of the region. All roads to the north and east out of the region must climb mountain passes with elevations of at least 10,000 feet. Roads to the south and west cross desert expanses. Colorado U.S. 160, the major east-west route within the region, comes over Wolf Creek Pass from the Rio Grande Basin to the east; passes through Pagosa Springs, Bayfield, Durango, Mancos, Cortez, and Dove Creek; then travels into Utah headed towards Moab. Colorado U.S. 84 runs south from Pagosa Springs into New Mexico. Colorado U.S. 550 runs north from Durango over Molas Pass; through Silverton; and over Red Mountain Pass towards Montrose. This same highway runs south from Durango to Farmington, New Mexico. Colorado 145 leaves Cortez traveling northeast through Rico, and over Lizard Head Pass on its way by Telluride towards Montrose. Colorado U.S. 666 reaches Gallup, New Mexico south of Cortez. This north-south dominance in highways indicates close associations with Farmington and other New Mexico communities.

Table 59 is a mileage summary of state highways and county roads. Map 5 indicates that traffic volume is greatest on those highways mentioned in the above paragraph. Also, a high volume of traffic is found on Colorado 172 which crosses Florida Mesa between Durango and Ignacio. Table 60, Minimum Highway Distance from Selected Points to Durango, emphasizes the isolation of the region from major cities, such as Albuquerque, Salt Lake City, Grand Junction, and Denver.

"Highway construction and maintenance is very costly because of terrain and climate. A high percentage of soils in the Basin are shale derived and unstable. When roads are built with these materials, there is constant shifting of the base resulting in rapid deterioration of highway surfaces. Heavy snowfall on mountain passes and freeze-thaw action on roadbeds add greatly to maintenance costs.

County roads are largely soil and gravel, and in the past few years considerable progress has been made to grade, improve, and refine them...

Because of the mountainous terrain in much of the project area (the San Juan Basin), highways are constructed in valleys thereby using the most valuable and productive farmland for transportation."\*

\*San Juan Resource Conservation and Development Project Plan, 1973.







TABLE 59: MILEAGE SUMMARY BY  
STATE HIGHWAYS AND COUNTY ROADS

	STATE HIGHWAY	COUNTY ROADS	TOTAL
ARCHULETA	93	448	541
DOLORES	42	619	661
LA PLATA	152	980	1,132
MONTEZUMA	163	1,129	1,292
SAN JUAN	38	150	188
REGION 9	488	3,336	3,814
COLORADO	8,525	65,888	74,413

SOURCE: Colorado State Highway System, Route Description and Mileage Statistics, State Department of Highways, January 1, 1973.



TABLE 60:

## MINIMUM HIGHWAY DISTANCE TO SELECTED POINTS FROM DURANGO

COLORADO	MILES	UNITED STATES	MILES
Alamosa	150	Albuquerque, N.M.	220
Colorado Springs	304	Farmington, N.M.	50
Cortez	46	Monticello, Utah	107
Denver	339	Phoenix, Ariz.	550
Dove Creek	81	Salt Lake City, Utah	186
Fort Collins	402		
Grand Junction	172		
Montrose	110		
Pagosa Springs	60		
Pueblo	274		
Rico	92		
Silverton	50		
Trinidad	261		
U.S. Interstate 70	169		







In the Status of Planning Checklist, /4.3-B/, the Colorado Department of Highways explains how its planning affects BLM lands.

Numerous truck lines service the region, including the following:

**Pagosa Springs-**

Rio Grande Motor Way, Inc.  
United Parcel Service

**Dove Creek-**

Romer Mercantile and Grain Company

**Durango-**

Burnett Construction Company  
City Taxi, Inc.  
Don Ward, Inc.  
Durango Transfer  
Garrett Freightlines, Inc.  
N.W. Transport Service, Inc.  
Boyd E. Richner, Inc.  
Rio Grande Motor Way, Inc.  
Tri-City Transfer and Storage

**Cortez-**

Bridgewater Trucking  
Cortez Taxi and Transfer, Inc.  
Garrett Freightlines, Inc.  
C.B. Johnson, Inc.  
Nichols Trucking  
Pacific Island Transportation Company  
Tri-City Transfer and Storage

**Silverton-**

C.B. Johnson, Inc.

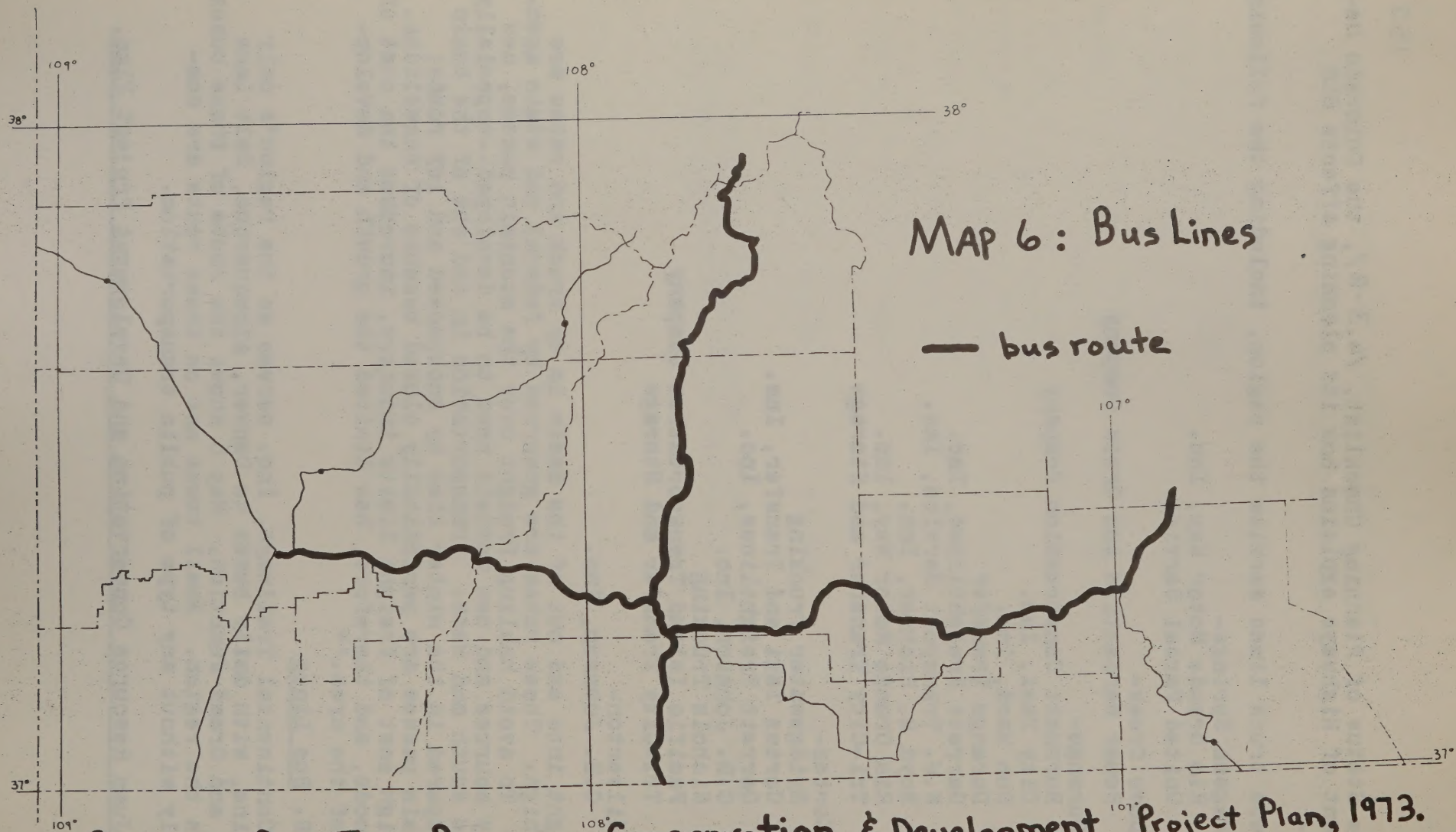
"Freight into and out of the Basin is by truck and rates are very high. These rates are governed by federal and state agencies. To avoid hauling freight over the mountain passes, new supply sources and new markets need to be developed--especially to the south and west. Transportation in and out of the Basin is hampered in the winter time by snowpacked and icy roads; mountain passes are periodically closed because of snowslides. The high cost of freight limits industry, increases the cost of all goods, and therefore, has limited the growth and development of the area."\*

**B. Bus Lines**

Continental Trailways, Inc. serves as the region's only bus line, with daily buses to Denver, Albuquerque, Salt Lake City, and Grand Junction. Map 6 shows the route of these buses within the region. Small towns not on these route are completely without any type of public transportation.

\*San Juan Resource Conservation and Development Project Plan, 1973.





SOURCE: San Juan Resource Conservation & Development Project Plan, 1973.



### C. Railroads

The railroad stopped serving the San Juan Basin several years ago. All that remains is the shortrun, dead end narrow gauge tourist train of the Denver and Rio Grande Western Railroad which operated during the summer months between Durango and Silverton. A similar, though less publicized, dead end narrow gauge line is operated by the Colorado and New Mexico Railroad Authority in the Cumbres Pass area of southeast Archuleta County. Valuations of these two operations are given in Table 61.

### D. Airports

Commercial airports served by Frontier Airlines are located in La Plata County thirteen miles southeast of Durango on Colorado 172 and in Montezuma County three miles south of Cortez. Airline valuations are given in Table 61. Destination of flights and travel times from these two cities can be found in Table 62. The runways of both airports are asphalt with lengths of 8,220 feet at La Plata County Airport and 7,200 feet at Cortez. Fixed wing and helicopter charter are available at La Plata County Airport. Smaller, non-commercial airports are located at Pagosa Springs, Dove Creek, and Arboles.

One of the major issues in the region involved airports. Plans for a \$ 4.1 million expansion by 1978 exist for the airport near Durango. This would enable the airport to accommodate jet traffic. There is also a question of a regional airport located between Cortez and Durango. In 1970, the Four Corners Regional Commission published Four Corners Jet Airport, An Economic Feasibility Site Selection Study which was prepared by Isbill Associates and Wilbur Smith and Associates. Some people believe that improved air transportation facilities are prerequisite to attracting new industries into the region, and the resulting economic expansion. Another side of the issue is found in people who question the personal benefits of such economic expansion.



TABLE 61:

## SELECTED TRANSPORTATION VALUATIONS

## RAILROADS:

Colorado and New Mexico Railroad Authority	
Archuleta	\$ 1,520
Denver and Rio Grande Western Railroad Company	
La Plata	\$1,004,500
San Juan	\$ 410,190
	\$1,414,690

## AIRLINES:

Frontier Airlines, Incorporated	
La Plata	\$ 33,840
Montezuma	\$ 25,720
	59,560
Sky Chopper, Incorporated	\$ 24,130

SOURCE: Third Annual Report of the Division of Property Taxation, State of Colorado, 1973.



TABLE 62: FRONTIER AIRLINE FLIGHTS

CORTEZ to:	Hours	Daily Direct Flights
Alamosa	1*	1
Denver	1½*	2
Durango	½	2
Albuquerque	2*	1
Farmington, N.M.	½	2
Gallup, N.M.	1*	2
Phoenix	3*	1
DURANGO to:		
Alamosa	½	1
Cortez	> ½	2
Denver	1	3
Gunnison	½	1
Albuquerque	2*	2
Farmington, N.M.	> ½	3
Gallup, N.M.	1½*	2
Phoenix	3½*	2

\* one or more stops

SOURCE: Colorado-A Regional Approach.



### /3.2/ COMMUNICATIONS

#### A. Television and Radio

One television station, KREZ (in Durango), originates in the San Juan Basin. It went on the air in 1965, independent of a network affiliation. At varied locations, television can also be received from Grand Junction, Farmington, Albuquerque, and/or Salt Lake City.

Table 63 lists the four radio stations of the region. Some southern areas also can receive radio from Farmington and Aztec, New Mexico during the day.

#### B. Newspapers

Table 64 gives information about the newspapers of the San Juan Basin. The Durango Herald comes closest to serving as the region newspaper. Denver and New Mexico papers also have some circulation. It should be noted that in October, 1973 The Four Corners Chieftain, the Ignacio Chieftain, and the Bayfield Blade merged to form The Mountain Eagle.

#### C. Telephone Service

San Juan and the greater portions of La Plata and Montezuma Counties are served by Mountain States Telephone and Telegraph Company.

Universal Telephone Company of Colorado, with headquarters in Pagosa Springs, offers telephone service to all Archuleta County residents and to La Plata County residents around Arboles, Ignacio, Hesperus, and Marvel. REA loans seem to be on the way so that this company may expand its inadequate lines and central office equipment.

Pleasant View, Cahone, and Yellow Jacket, in Montezuma County are served by the Farmers Mutual Telephone Company.

The east end of Dolores County is served by the Rico Telephone Company, while the west end of the county has the Continental Telephone Company of Utah (nearest office in Monticello, Utah).

Table 65 lists selected communication valuations. Microwave radio facilities of Mountain Bell are located on Map 7.

"Direct-dial telephone service is not available in the San Juan project area. This service is needed to save time and expense to all users. Since toll calls are required to reach neighboring communities, the expansion of toll-free service areas would greatly assist communications between communities. In most rural areas there are too many people on each party line, greatly hindering effective use of the telephone facilities."\*

\* San Juan Resource Conservation and Development Project Plan, 1973.



TABLE 63:

## RADIO STATIONS

Station	KVFC	KDGO	KIUP	KIUP-FM
City	Cortez	-----Durango-----		
Went on Air	1955	1958	1935	very recently
Kilocycle Frequency	740	1240	930	100.5 mhz
Network	ABC/MN	CBS	--ABC/C, Intermountain--	

SOURCE: Broadcasting Publications, Inc., Broadcasting Year-book 1973, Washington, D.C.



## TABLE 64:

## NEWSPAPERS

## DAILY:

- 1) Durango Herald  
 Publisher or Editor: P.O. Box 61  
 Mr. & Mrs. Arthur Ballentine, Jr. Durango 81301  
 247-3504  
 Circulation: 6,295 (weekdays), 6,862 (Sunday)  
 (90% of which is within the five county region)

## SEMIWEEKLY:

- 2) Cortez Sentinel  
 Publisher or Editor: Drawer 0  
 Russell D. Brown Cortez 81321  
 565-8574  
 Circulation: 4,305  
 (about half of which is local)
- 3) Montezuma Valley Journal  
 Publisher or Editor: Drawer 0  
 C. Dewey Brown Cortez 81321  
 565-8527  
 Circulation: 4,000  
 (mostly local)

## WEEKLY:

- 4) Dolores Star  
 Publisher or Editor: P.O. Box 644  
 Laurence & Marilyn Pleasant Dolores 81323  
 882-4486  
 Circulation: 760  
 (quite a few local)
- 5) Dove Creek Press  
 Publisher or Editor: P.O. Box 477  
 Miles Turnbull Dove Creek 81324  
 677-2214  
 Circulation: 723  
 (Two-thirds of which is local)
- 6) Mancos Times-Tribune  
 Publisher or Editor: P.O. Box 128  
 C.D. & R. Brown Mancos 81328  
 533-7766  
 Circulation: not obtained
- 7) The Mountain Eagle  
 Publisher or Editor: P.O. Box 297  
 Kathleen Parker Durango 81301  
 247-8061  
 Circulation: 1,500-2,000 (seasonal)  
 (basically local)
- 8) Pagosa Springs Sun  
 Publisher or Editor: P.O. Box 8  
 Glen Edmonds Pagosa Springs  
 81147  
 Circulation: 1,875  
 (a lot sent out of the local area) 968-2200



## NEWSPAPERS (cont.)

- 9) Silverton Standard  
Publisher or Editor:  
Larry Duthie  
Circulation: 1,200  
(only 200 of which is local)

P.O. Box 187  
Silverton 81433  
387-5477

SOURCES: Colorado Press Association, 1973.  
1336 Glenarm Place,  
Denver, Colorado  
also, conversations with local newspapers.



TABLE 65:

## SELECTED COMMUNICATION VALUATIONS

## TELEPHONE COMPANIES:

## American Telephone &amp; Telegraph Company

Archuleta	\$ 276,590
Dolores	133,940
La Plata	154,430
Montezuma	211,710
	<hr/> \$1,414,690

## Farmers Mutual Telephone Company

Dolores	\$ 12,200
Montezuma	21,060
	<hr/> \$ 33,260

## The Midland Telephone Company (Continental Telephone Company of Utah).

Dolores	\$ 55,440
---------	-----------

## Mobile Radio Communications Services

La Plata	\$ 7,510
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## Mountain States Telephone &amp; Telegraph Company

Archuleta	\$ 15,610
Dolores	28,590
La Plata	1,715,920
Montezuma	880,670
San Juan	53,720
	<hr/> \$2,694,510

## Rico Telephone Company

Dolores	\$ 2,400
---------	----------

## Universal Telephone Company of Colorado

Archuleta	\$ 205,320
La Plata	5,020
	<hr/> \$ 210,340

## Ute Communications

Montezuma	\$ 9,130
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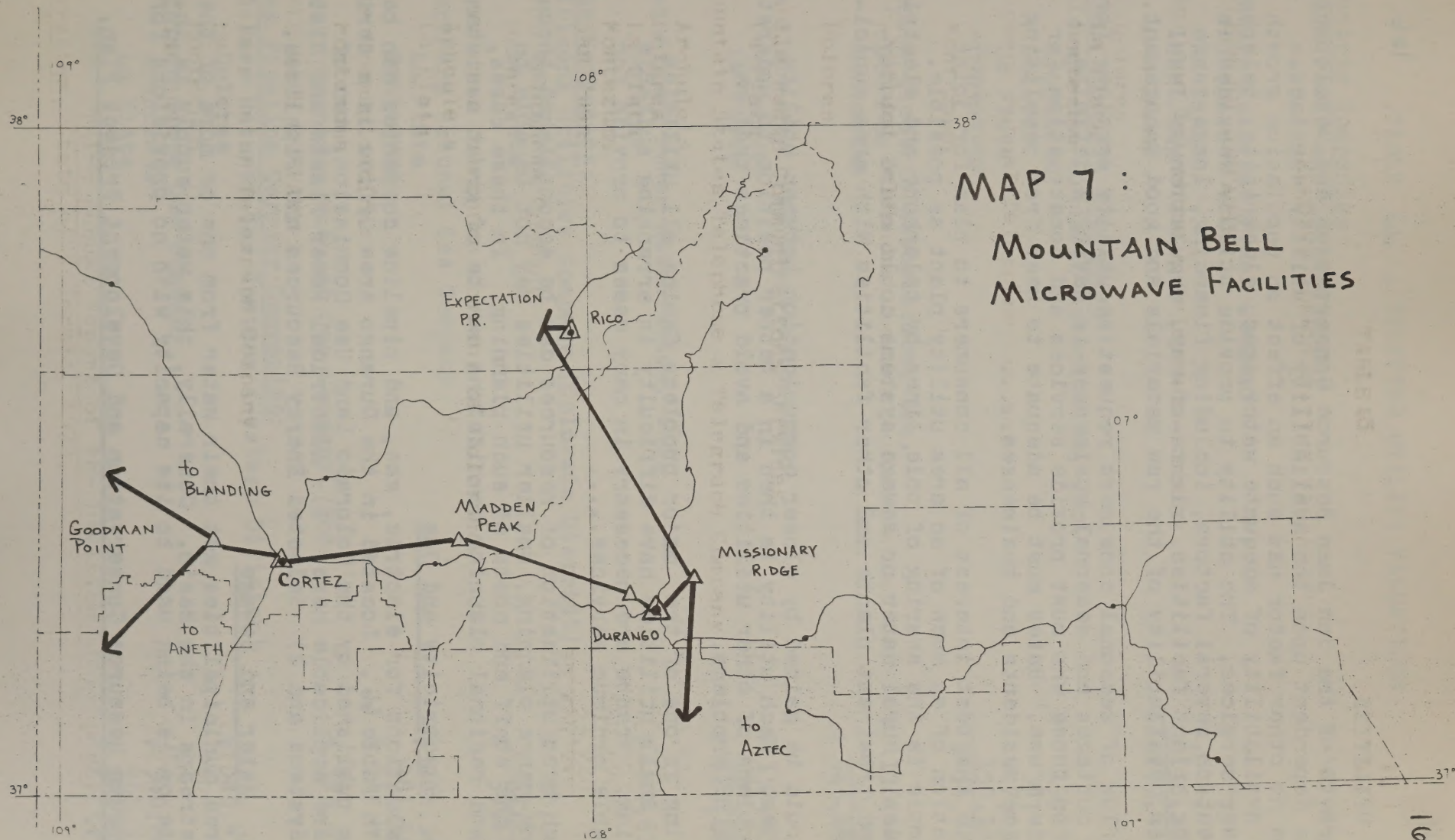
## TELEGRAPH COMPANIES

## Western Union Telegraph Company

La Plata	\$ 2,100
Montezuma	750
San Juan	400
	<hr/> \$ 3,250

SOURCE: Third Annual Report of the Division of Property Taxation, State of Colorado, 1973.







### /3.3/ UTILITIES

"The growth of the San Juan Resource Conservation and Development area is dependent upon the availability of utility services. Perhaps no other factor has such an effect on population growth as the availability of adequate water, gas, electricity, telephone and sewer services. The ability to provide utility services is dependent on several factors, including financing, long-range planning, plant facilities, rights-of-way, regulation by legal entities, availability of the raw materials and good management.

The influx of seasonal consumers requesting utility services for summer cottages and seasonal businesses is having a definite impact on those who must provide services and construction for short term use. Rates must be adequate to keep from penalizing full-time residents and businesses.....

It is in the best interest of all consumers to plan for joint utilization of as much of an area utility plant as possible. An example is the sharing of pole lines by telephone and electric utilities. Rural water or sewage systems could share jointly-financed treatment plants and other facilities with area municipalities.

Much could be gained by closer communication between utility companies. Each utility is then in a better position to understand the problems of other utilities and avoid practices that may be causing problems.

Financing is one of the major problems facing all utilities today. Small utilities have difficulty in arranging suitable financing. Grants are necessary in many cases to provide for acceptable minimum services.....

Although best utilization of resources can be accomplished through good long-range planning, smaller utilities may not be able to afford the staff and costs of such planning. In these cases, local and regional planning commissions can be of great assistance."\*

#### A. Electricity and Gas

Valuations for electric, gas, and pipeline companies can be found in Table 66. Located in the Durango Area Office is a series of maps published by the Colorado Land Use Commission, two of which are applicable here: 1) Electrical Power Plants and Distribution Systems and 2) Selected Energy Resources and Pipelines.

#### B. Water and Sewage

"Area municipalities get their water from one or more of the major streams in the Basin. Generally, this water supply is inadequate or is being used to its capacity with no provisions for

\* San Juan Resource Conservation and Development Project Plan, 1973.



TABLE 66 : SELECTED UTILITY VALUATIONS

Electric Companies:

Utah Power and Light Company	\$ 303,600
Montezuma	

## Western Colorado Power Company

Dolores	\$ 28,380
La Plata	1,514,970
San Juan	<u>156,110</u>
	\$1,699,460

Rural Electric Companies:

## Colorado-Ute Electric Association, Inc.

Archuleta	\$ 19,230
Dolores	38,420
La Plata	247,030
Montezuma	<u>150,140</u>
	\$454,820

## Empire Electric Association, Inc.

Dolores	\$ 136,640
Montezuma	<u>810,050</u>
	\$ 946,690

## La Plata Electric Association, Inc.

Archuleta	\$ 152,030
La Plata	<u>337,150</u>
	\$ 489,180

## San Miguel Power Association, Inc.

Dolores	\$ 9,610
---------	----------

Gas Companies:

## Citizens Utilities Company (Colorado District)

Archuleta	\$ 28,000
La Plata	<u>11,650</u>
	\$ 39,650

## Northern Natural Gas Company

La Plata	\$ 276,160
Montezuma	<u>281,260</u>
	\$ 557,420

## Rocky Mountain Natural Gas Company, Inc.

	\$ 325,490
--	------------

Gas Pipeline Carrier Companies:

## El Paso Natural Gas Company (Western Division)

Dolores	\$ 325,470
---------	------------

## Western Slope Gas Company

Archuleta	\$ 340,840
La Plata	<u>461,530</u>
	\$ 802,370



## SELECTED UTILITY VALUATIONS, CONT'D.

Pipeline Companies:

The Cherokee and Pittsburg Coal and Mining Company	
Dolores	\$ 34,400
Shell Oil Company	
Montezuma	\$ 7,320
Texas-New Mexico Pipeline Company	
Montezuma	\$ 119,360

Source: Third Annual Report of the Division of Taxation, 1973.



expansion. Many small communities have installed new water systems, some without thought toward future development. As new land developments spring up and the existing communities expand, the available water will be in short supply.....

Most cities and towns have central water and sewage systems. The rural areas are dependent upon wells and, in some cases, cisterns for domestic water. Exceptions may be found in the rural communities of the Mancos, Dolores, and Durango areas that have installed rural water systems. In general, domestic wells with quality water and adequate capacity are not readily obtainable. The water supply on the Ute Mountain Reservation is a critical problem. The planned La Plata and Dolores Projects will make water available to some areas not presently serviced.

Rural areas are entirely dependent upon individual septic systems and disposal lagoons for sewage disposal.

A pressing situation at this time is the rapid subdivision of farms and ranches for housing developments. The present and projected construction of homes and recreational developments in the rural areas is causing critical water and sewage disposal problems. Proper controls must be accomplished through sound land use planning and implementation.

In general, the soils in the project area have limitations when used for septic tank filter fields. Shallow depth, rock outcrops, slow permeability and, in some cases, steep slopes and high water-tables are limiting factors. A study to determine quantity and quality of the underground water resources should be made."\*

Information about water and sewage utilities in Durango, Cortez, and Pagosa Springs is given in Table 67. Sewage disposal and source of water census data for housing units are shown in Tables 68 and 69, respectively. Sanitation and water districts are given in Table 70. The Colorado Land Use Commission map series (available in Durango Area Office) contains maps on Water Services (existing and proposed) and Potential Groundwater Available.

### C. Solid Waste

"Solid waste collection and disposal services are not available in all communities of the area. Towns and rural areas without such facilities rely on individuals to dispose of their refuse in town, county, and private disposal areas. This is becoming an increasingly difficult problem.

A Forest Service study to determine the best disposition of solid wastes has been completed on the San Juan National Forest. The forest was divided into four waste sheds for collection purposes.

\* San Juan Resource Conservation and Development Project Plan, 1973.



TABLE 67 :

WATER AND SEWAGE UTILITIES IN DURANGO, CORTEZ,  
& PAGOSA SPRINGS

Durango

Water Company Name:	City of Durango
Water Source:	river and reservoir
Total Hardness of Tap Water:	99
Pumping Capacity:	20.0 MGD
Peak Demand:	11.2 MGD
Static Pressure:	60 psi

---

Sewage Company Name:	City of Durango
Treatment Plant Capacity:	5.0 MGD
Type of Treatment:	Secondary

Cortez

Water Company Name:	City of Cortez
Water Source:	river or stream
Total Hardness of Tap Water:	110
Pumping Capacity:	5.8 MGD
Peak Demand:	5.5 MGD
Static Pressure:	60 psi

---

Sewage Company Name:	City of Cortez
Treatment Plant Capacity:	5.0 MGD
Type of Treatment:	Primary

Pagosa Springs

Water Company Name:	City of Pagosa Springs
Water Source:	River
Total Hardness of Tap Water:	73
Pumping Capacity:	3.0 MGD
Peak Demand:	1.0 MGD
Static Pressure:	100 psi

---

Sewage Company Name:	Pagosa Springs Sanitation District
Treatment Plant Capacity:	0.2 MGD
Type of Treatment:	primary

Source: COLORADO COMMUNITY PROFILES - DURANGO, COMMUNITY  
DEVELOPMENT SECTION, COLORADO DIVISION OF COMMERCE AND DEVELOP-  
MENT, 1973.



TABLE 68 :  
SEWAGE DISPOSAL

	Public Sewer	Septic Tank or Cesspool	Other
Archuleta	431	558	207
Spanish-American	186	72	78
Dolores	222	364	49
La Plata	3,842	2,148	398
Spanish-American	584	138	92
Montezuma	2,603	1,480	340
Spanish-American	227	69	46
San Juan	281	10	--

Source: U.S. Census, 1970.

TABLE 69 :  
SOURCE OF WATER

	Public System or Private Company	Individual Well	Other
Archuleta	497	531	168
Spanish-American	199	95	42
Dolores	380	180	75
La Plata	3,920	1,997	471
Spanish-American	623	132	59
Montezuma	3,733	229	461
Spanish-American	297	7	38
San Juan	291	--	--

Source: U.S. Census, 1970.



TABLE 70 : SANITATION AND WATER DISTRICTS

Sanitation DistrictsCounty

Bayfield  
Cortez  
Dove Creek  
Ignacio  
Pagosa Springs

La Plata  
Montezuma  
Dolores  
La Plata  
Archuleta

Water Districts

Montezuma County No. 1  
Northeast Durango  
South Durango

Montezuma  
La Plata  
La Plata

Water and Sanitation Districts

Pagosa  
Purgatory

Archuleta  
La Plata

Source: 1972 Local Government Financial Compendium, Division of  
Local Government, Department of Local Affairs.



The boundaries of the waste sheds were based on a combination of topography, drainages, and accessibility. The present plan calls for depositing garbage and trash from three waste sheds into city landfills at Dolores, Durango, and the La Plata County landfill west of Bayfield. The solid wastes generated by the Pagosa and Piedra Districts will be transported to the La Plata landfill until such time that Archuleta County develops its own landfill.

The Forest Service is not participating in the development of the three above-mentioned landfills, because they are already in existence. They pay a yearly lump sum to use the La Plata County landfill and a cost-per-yard to use the Durango and Dolores facilities.

The Forest Service met with the town of Pagosa Sprins and Archuleta County to determine what can be done to develop a sanitary landfill in the area. A feasibility study will be make in the near future. If the study is favorable, the Forest Service will then cooperate in the development. The Forest Service participation may be in providing the land under special use permit, contributing toward the actual constuction, or both."\*

Further investigation could point out currently in use as solid waste dumps.

\* San Juan Resource Conservation and Development Project Plan, 1973.



/3.4/ FIRE CONTROL

A. BLM

An unpublished notebook of Bill Reynolds (Montrose District Office) speaks of fires in the Durango-Chromo planning unit: "Fire has not been a major problem on national resource lands. The annual average burn is about five acres, but with most of this average being accumulated in 1972. Both 1972 and 1973 show an increase over previous years in both occurrence and acreage burned." (See Table 71).

Jerry Kendrick (Durango Area Office) observed that the San Juan Resource Area as a whole experiences fires on roughly ten acres of BLM land each year. Further investigation could consolidate a history of fire occurrence of BLM lands for the entire San Juan Resource Area, taking note of size and location.

B. Other Fire Organizations

U.S. Forest Service  
 Colorado State Forest Service  
 Durango Fire Department (full-time)  
 Cortez Volunteer Fire Department  
 Pagosa Springs Volunteer Fire Department  
 Animas Fire Protection District  
 Bayfield Volunteer Fire Department  
 Mancos Volunteer Fire Department



TABLE 71:

## FIRE OCCURRENCE ON NATIONAL RESOURCE LANDS (DURANGO-CHROMO)

	# of Fires	# of False Alarms	Acres Burned
1968	2	1	2
1969	2	0	2
1970	1	1	1
1971	1	2	2
1972	10	5	19
1973	5	1	4

1974 Fire Crew PlanStation

2 three-man pumpers	Montrose and Nucla
1 two-man pumper	Durango
2 Dispatchers	Durango and Montrose
3 Crew Bosses	Durango and Montrose
1 Fire Control Officer	Montrose

(The U.S. Forest Service has a fire base at La Plata Airfield.)

SOURCE: Bill Reynolds, Montrose District Office.



## /3.5/ LAND SURVEY GUIDE

A map (located in the Durango Area Office) identifies townships within the Resource Area as explained in Table 72. If and when townships were surveyed is summarized here by County:

- Archuleta - parts of five sections are unsurveyed (includes the old Tierra Amarilla Mexican landgrant); most was surveyed prior to 1910
- Dolores - all but parts of three sections have been surveyed, largely before 1910
- La Plata - parts or all of six sections (of 46 total) are unsurveyed, the greatest concentration being in the northeast part of the county; about three-fourths of the County was surveyed before 1910
- Montezuma - all or parts of ten sections (of 60 total) are unsurveyed, all but one of these occurring on lands of the Ute Mountain Tribe
- San Juan - all sections are unsurveyed except parts of two sections in the southwest corner of the County

The backlog of Cadastral Survey work is a well-known fact. Be that as it may, unsurveyed sections and lost monuments can and have become of issue when they delay land transactions or subdivision plat approvals adjacent to National Resource Lands.



## TABLE 7a:

## BLM MEMORANDUM ON TOWNSHIP SURVEYS

February 7, 1968

To: District Managers

From: State Director, Colorado

Subject: Cadastral Surveys -- Rock Monuments vs. Brass Caps

At the right-of-way liaison meeting in Glenwood Springs on October 5, Homer Benton of the Durango Area Office asked if we had any information from which he could readily identify the surveys that were monumented with rocks or similar natural objects, and surveys that were monumented with brass caps.

While one would have to go to the field notes of each individual survey to find the exact type of monument, the attached map will give you some help to identify whether a survey is monumented with brass caps or otherwise. The symbols at the upper left corner of each township on the map mean:

- A = Surveyed before 1910
- B = Surveyed 1910 or later
- C = Unsurveyed

All three conditions can occur in one township.

The breaking point between use of rock and similar natural type objects for survey corners and the change to brass caps occurred about 1908. Therefore, you can assume that any surveys made prior to that time are identified by rocks, pits (on the eastern plains of Colorado), charred sticks, or in some cases, posts. After 1908, generally, the surveys will be monumented with brass caps. This marked the end of the contract system by which the General Land Office had obtained surveys of the public land and the beginning of the system we are familiar with today. The problem lies in the period 1908 to about 1911, since in this transition there occurred some monumentation with brass caps and some with rocks. You already have copies of our index to township surveys, indicating the date of the acceptance. This will provide you with a fairly accurate guide concerning the type of monumentation you should expect to find.

J. Elliot Hall



## /3.6/ LAW ENFORCEMENT

The following is reported from conversations with county sheriffs concerning their capabilities to meet BLM needs for law enforcement protection on public lands:

- Archuleta - no enforcement troubles
  - fifteen men available for fire protection
- Dolores - no enforcement troubles
- La Plata - no un-routine (camp-ins or major crimes) problems to date, but would be hard-pressed (economically and manpower-wise) to provide more than routine services
  - finds BLM cooperative
- Montezuma - short of manpower for whole county in general (with increased numbers of tourists and residents, more problems will arise)
  - however, will benefit from planned Public Safety Building
  - one fire truck available for fires
- San Juan - have always handled any problems which arose
  - most troubles connected with sheep
  - only increase is more people in area, especially during summer months



### /3.7/ EDUCATION FACILITIES

#### A. Public School Districts

The San Juan Basin is divided into nine school districts roughly congruent with county lines. (Montezuma and La Plata counties being subdivided). See Table 73 and Map 8.

Table 74 indicates that past enrollment figures reflect population decline during the 1960's in all but La Plata and Montezuma Counties. Since 1970, however, enrollment is again on the rise generally. The Spanish-American figures for 1970 are included to give an idea of the numbers of Spanish-Americans in the public school system. Further investigation could determine the extent of bilingual education in these counties, particularly in Archuleta County which in 1970 held a student population that was 59 percent Spanish-American.

Enrollment for the 1973-1974 school year is given in Table 75 by individual schools in each district. This table also indicates the extent to which schools are filled to capacity and what year the school buildings were built. When two years are listed, the first year constitutes initial construction while the second year indicates physical additions on to the older building. Over two-thirds of the schools were built in the 1950's or earlier.

A discussion of enrollment, capacity, and physical plant by school district follows:

##### 50 Jt. Archuleta County

- enrollment barely increasing to now, but is expected to accelerate as a result of new land developments
- remodeling in progress
- now building a recreation and athletics complex south of town for use by both schools and community; has been partially funded through Four Corners Regional Commission and Bureau of Outdoor Recreation; projected completion - 1977
- have land for new high school (capacity 500) next to this recreation complex

##### Re No. 1 Dolores County

- remodeling and painting in progress
- discussion presently on the construction of a new junior high school as the current building (1940) is almost full

##### 9-R Durango

- as of 1969, many Durango schools overfull or close to capacity, including Needham Elementary, Sunnyside Elementary, Miller Junior High, and Durango Senior High
- enrollment dropped by 181 students between 1969 and 1974
- construction almost complete on new high school (capacity - 1,100 for grades 10-12)

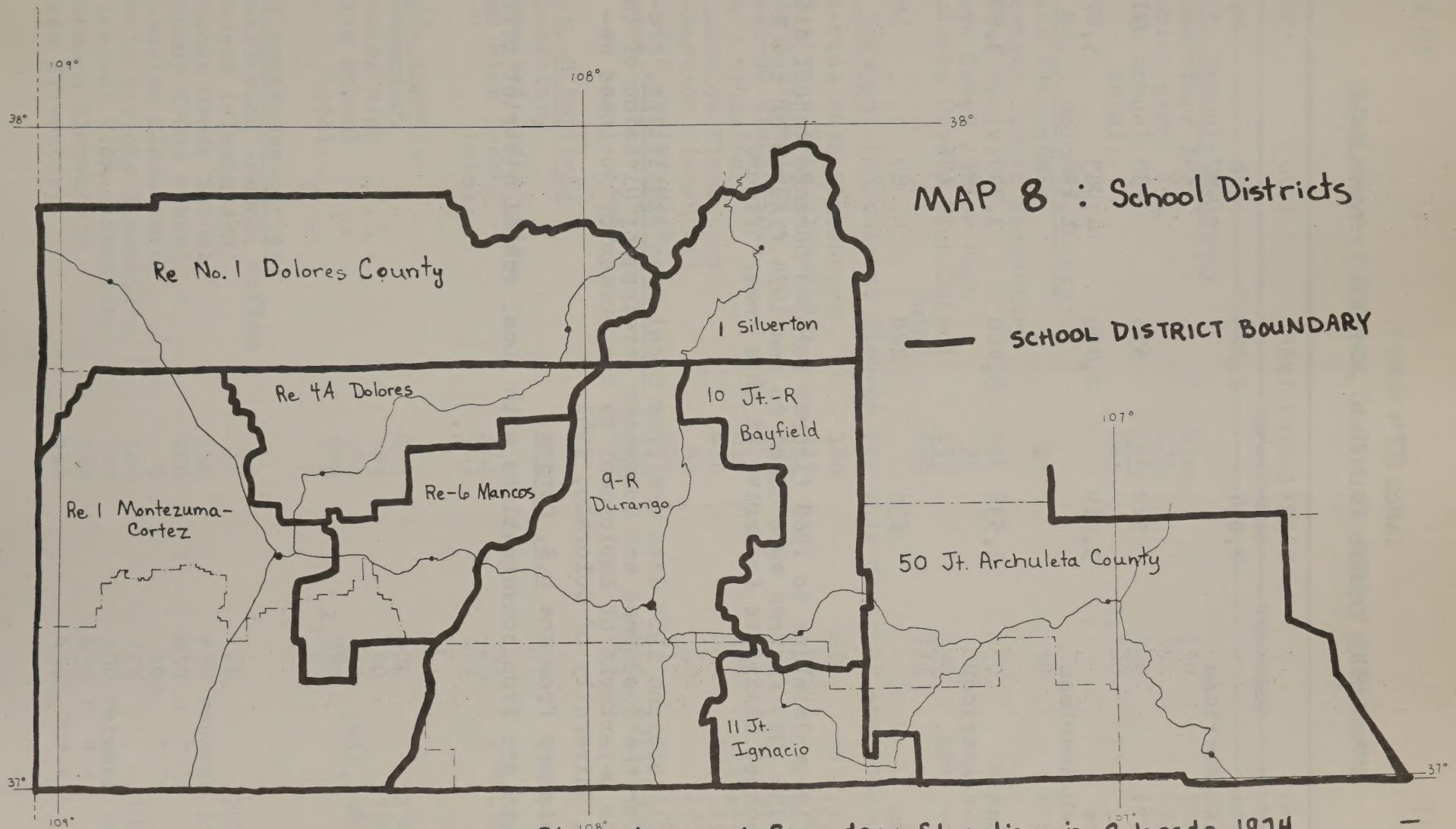


## SCHOOL DISTRICTS

Name	Counties wholly or partially included in district
50 Jt. Archuleta County (Pagosa Springs)	Archuleta Hinsdale
Re. No. 1 Dolores County	Dolores Montezuma
9-R Durango	La Plata
10 Jt.-R Bayfield	La Plata Archuleta
11 Jt. Ignacio	La Plata Archuleta
Re 1 Montezuma-Cortez	Montezuma
Re 4A Dolores	Montezuma
Re-6 Mancos	Montezuma
1 Silverton	San Juan

SOURCE: Consolidated Report on Elementary and Secondary Education in Colorado, 1974 by the Colorado Department of Education.





SOURCE: Consolidated Report on Elementary and Secondary Education in Colorado, 1974,  
by the Colorado Department of Education.



TABLE 74 :  
ENROLLMENT TRENDS IN PUBLIC SCHOOLS (grades K-12)

	1956	1960	1970	1974
Archuleta Spanish-American %	2,064	2,225	828 487 59%	845
Dolores	522	536	438	433
La Plata Spanish-American %	3,719	4,490	4,963 1,198 24%	5,076*
Montezuma Spanish-American %	2,532	3,480	3,799 394 10%	3,803
San Juan	236	220	89	168

\* data incomplete due to 1969 figures for 9-R Durango school district--The 1969 figures were added to the 1974 figures of the 2 other school districts to arrive at this 'near' figure.

SOURCES: 1956 and 1960 data are from Local Area Statistics, prepared for the Resources and Community Development Division of the Colorado Department of Employment by the Bureau of Business Research, University of Colorado, 1961.

1970 data are from the U.S. Census.

1974 data are from conversations with local school district officials.



TABLE 75 :

## ENROLLMENT, CAPACITY, and YEAR BUILT, by School

	1973-1974 Enrollment	Capacity	Year Built
<u>50 Jt. Archuleta County:</u>			
Elementary	450	550	1968
Junior High	175	350	1926
High School	220	300	1954
total:	845	1,200	
<u>Re. No. 1 Dolores County:</u>			
Rico Elementary	15	50	1952
Seventh Street Elementary (Dove Creek)	184	250	1952, 1956
Dove Creek Junior High	76	80	1940
Dolores County High School	158	390	1947 or 1949
total:	433	770	
<u>9-R Durango: (Enrollment figures for this district are October, 1969)</u>			
Florida Mesa Elementary	188	274	1959, 1960
Ft. Lewis Mesa Elementary	110	164	1961
Mason Elementary	158	204	1955
Needham Elementary	681	677	1951, 1953, 1959
Park Elementary	214	108	1956, 1974
Riverview Elementary	410	463	1956, 1959
Sunnyside Elementary	43	60	1962
Miller Junior High	634	612	1962
Durango Senior High	1,257	822	1917, 1936, 1956
total:	3,695	3,384	
<u>10 Jt.-R Bayfield:</u>			
Elementary	200	300	1954, 1973
Combined Junior High and High School	211	311	1946, 1973
total:	411	611	
<u>11 Jt. Ignacio:</u>			
Elementary	425	500	1945
Junior High	185	190	1950
High School	360	360	1962, 1963, 1964
total:	970	1,050	
<u>Re 1 Montezuma-Cortez:</u>			
Battlerock School, McElmo Canyon (elementary)	16	20	1910
Downey Grade School	118	250	between 1951-1968
Kemper Grade School	426	450	" " " "
Lakeview Elementary	8	40	" " " "
Lewis Arriola Elementary	120	175	1968
Pleasant View Elementary	49	100	between 1951-1968
Manauh Elementary	339	450	" " " "
Mesa Elementary	418	450	" " " "



## ENROLLMENT, CAPACITY, and YEAR BUILT, by School, Cont'd.

	1973-1974 Enrollment	Capacity	Year Built
<u>Re 1 Montezuma-Cortez, cont'd.:</u>			
Cortez Junior High	524	600	1951
Montezuma-Cortez High School	837	900	1968
total:	2,855	3,435	
<u>Re 4A Dolores:</u>			
Dolores Grade School		200	1946
( two buildings)	280	180	1964
Dolores Junior High	154	210	1958
Dolores High School	114	240	1960
total:	548	870	
<u>Re-6 Mancos:</u>			
Elementary	200	200	1947
Junior High	79	79	1968
High School	121	130	1902, 1955
total:	400	409	
<u>1 Silverton:</u>			
Elementary	84	} 260	1911 (one building)
Junior High	35		
High School	49		
	168		

SOURCE: - Conversations with school district officials  
 - 9-R Durango enrollment and capacity data from  
Comprehensive Study, Durango School District 9-R,  
 Bureau of Educational Research, University of Denver, 1970.



## 10 Jt-R Bayfield

- plan to build vocational shop, gym, and four new classrooms on to high school; no bond issue passed yet

## 11 Jt. Ignacio

- although junior high and high school close to full, no new construction plans due to decreasing enrollment in elementary grades

## Re 1 Montezuma - Cortez

- crowded conditions in junior and senior highs
- preliminary discussion of constructing new addition to junior high

## Re 4A Dolores

- enrollment up 100 over previous year; if trend continues, will soon be crowded
- remodeling in progress

## Re 6 Mancos

- all three schools full
- pending funds, plan to construct vocational agricultural shop
- within four or five years, need to replace high school (1902)

## 1 Silverton

- no plans

Table 76 shows selected information by school district for school years 1971-1972 and 1972-1973. During this time, no major changes in number of personnel took place. The highest paid teachers could be found in 9-R Durango, 11 Jt. Ignacio, and Re 1 Montezuma - Cortez. 10 Jt-R Bayfield held the lowest paid teachers. The average salary of classroom teachers rose during the two-year period in all districts but Re 4A Dolores and 1 Silverton. Changes in pupil/teacher ratios can reflect enrollment changes and/or changes in number of teachers. In general, slightly fewer pupils enrolled per teacher in 1972-1973 than in the previous year. However, in 10 Jt.-R Bayfield and 11 Jt. Ignacio, the number of pupils per teacher increased slightly during that time. Without further investigation, it is difficult to understand the fluctuations in annual dropout rate. 9-R Durango, 11 Jt. Ignacio, Re 1 Montezuma - Cortez, and Re 4 Dolores were districts with relatively high dropout rates for either or both years. For both years, annual dropout rate was consistently low in Re-6 Mancos and 1 Silverton as well as turnover rates of teachers and administrators may be found in the Consolidated Report on Elementary and Secondary Education in Colorado, 1974 published by the Colorado Department of Education. Headstart programs exist in Durango, Cortez, Pagosa Springs, and Ignacio.

B. Private Schools

In 1970, 472 pupils of the region attended private schools (grades K-12). Three private schools are located in Durango: Durango Christian School, Sacred Heart School, and St. Columba's School.



TABLE 76 : SELECTED SCHOOL DISTRICT INFORMATION

	Number of Certified Personnel <sup>1/</sup>	Average Salary-Class- room Teacher <sup>2/</sup>	Pupil/ Teacher <sup>3/</sup> Ratio	Annual Dropout Rate (grades 7-12) <sup>4/</sup>
50 Jt. Archuleta County:				
1971-1972 <sup>5/</sup>	41	\$7,469	22.2	5.1%
1972-1973 <sup>5/</sup>	40	\$7,609	19.9	0.3%
Re No.1 Dolores County:				
1971-1972	31	\$7,649	17.6	5.5%
1972-1973	30	\$7,661	16.2	2.8%
9-R Durango:				
1971-1972	203	\$8,844	23.4	3.7%
1972-1973	205	\$9,241	21.9	6.8%
10 Jt.-R Bayfield:				
1971-1972	22	\$6,634	19.5	1.0%
1972-1973	26	\$7,077	21.5	3.9%
11 Jt. Ignacio:				
1971-1972	64	\$8,087	17.8	7.4%
1972-1973	65	\$8,277	18.2	2.1%
Re 1 Montezuma-Cortez:				
1971-1972	156	\$8,604	22.5	6.8%
1972-1973	158	\$8,969	22.6	7.3%
Re 4A Dolores:				
1971-1972	36	\$7,331	21.7	7.1%
1972-1973	34	\$7,229	20.5	5.8%
Re-6 Mancos:				
1971-1972	25	\$7,202	23.1	2.4%
1972-1973	24	\$7,690	22.2	1.0%
1 Silverton:				
1971-1972	17	\$7,809	12.9	3.2%
1972-1973	17	\$7,668	11.9	2.2%



1/ # of Certified Personnel: The total # of personnel in the district as on approximately October 15 who are employed in professional positions requiring legal certification to teach, administer, supervise, or direct in the insititutional program of a district.

2/Average Salary Classroom Teacher: The total annual salary of the certificated personnel whose function is classroom teaching, divided by the FTE of classroom teachers.

3/Pupil/Teacher Ratio: This is the number of pupils in membership as of approximately October 1, divided by the full time equivalency of classroom teachers.

4/Annual Dropout Rate: This is the percentage of the student body (grades 7-12) which dropped out of school during the ... school year.

5/ Fall to Fall.

Source: Consolidated Report on Elementary and Secondary Education in Colorado, 1974 by the Colorado Department of Education.



### C. State Colleges

Fort Lewis College, a four-year state school located in Durango, had an enrollment of 2,506 in 1973. Arts and Sciences, teacher education, business, and pre-professional fields are included in its curriculum.

Colorado State University Extension Offices are located in Pagosa Springs, Dove Creek, Ignacio, and Durango. CSU also has an Area Development Office in Cortez. According to notices, "Our job in the Area Development Office is to assist the people of this 'sleeping giant' country to study their assets, determine their needs and desires, set priorities, plan and implement their programs for the industrial, agricultural, recreational, social, and institutional development." Further investigation could establish communication with this office.

### D. Occupational Schools

The San Juan Basin Area Vocational-Technical School, east of Cortez, had 366 students enrolled in 1973. Its flexible curriculum includes practical nursing, food services, and automotive and secretarial work. San Juan Basin A.V.T.S. School of Practical Nursing and Brinker School of Surveying and Mapping, Inc. are located in Durango.



## /3.8/ MEDICAL FACILITIES

Table 77 lists health care facilities located within the San Juan Basin. These facilities are centralized in Durango and Cortez. Table 78 indicate distribution of types of health manpower in the region. San Juan County is presently without a resident physician, although one from Durango visits weekly.

Montezuma and Dolores Counties are "not served by an organized health department, but generalized public health nursing services are provided by Montezuma County with which Dolores contracts for services. The only hospital in the area is in Cortez, having 76 beds, 18 of which are in excess. Fifty-eight beds are programmed for modernization. There is one long-term care facility in Cortez having 60 beds. Fourteen additional beds are needed. There are no mental, tuberculosis, or rehabilitation facilities for this area...

The San Juan Basin Health Unit covers La Plata and Archuleta Counties. San Juan has a generalized public health nursing service. The area has one hospital - in La Plata County, having 157 beds, 28 of which are in excess. None requires modernization. The area also has one long-term care facility having 118 beds, 35 of which are in excess. None requires modernization. There are no mental, tuberculosis, or rehabilitation facilities in this area."\*  
Actually, two hospitals in Durango have a total of 157 beds. Clinics are also located in Towaoc and Ignacio for the Indian populations.

The centralization of emergency medical facilities has created a critical need for an emergency medical transportation system within the region.

Table 78 points out availability of ambulances and emergency medical technicians in each county. The Southwest Colorado Comprehensive Health Planning Council has completed an emergency medical services plan (see /4.3-B/).

"The above distribution of health facilities and manpower in the San Juan Basin indicates the need for the establishment of additional medical facilities in the Basin, staffed so as to provide an acceptable level of primary care at the local level."\*\*

\* Colorado State Plan for the Construction or Modification of Hospitals and Other Health Care Facilities, Colorado Department of Health, 1974.

\*\* San Juan Resource Conservation and Development Project Plan, 1973.



TABLE 77 : HEALTH CARE FACILITIES

190

Colorado Department of Health Area	Facility	Type	Licensed Bed Capacity
R-5	Southwest Memorial Hospital 925 South Broadway Cortez 81321 565-3743 Ronald L. Neilsen, Administrator (includes a Poison Control Center)	General Hospital	63
	Vista Grand Nursing Home 1221 N. Mildred Road Cortez 81321 565-9058 Ronald L. Neilsen, Administrator	Nursing Care Facility	60
R-6	Community Hospital 3801 Main Avenue P.O. Box 1429 Durango 81301 247-2250 Lowell J. Miller, Administrator	General Hospital	51
	Eventide of Durango Route 1, Box 117M Durango 81301 247-2215 John R. Rice, Administrator	Nursing Care Facility	118
	Mercy Hospital 375 E. Park Avenue Durango 81301 247-4311 Sister Mary Francis Hunt, Administrator	General Hospital	105
	Valley View Home Route 1 Bayfield 81122 884-2263 Mrs. Arlene M. Beaver, Administrator	Residential Care Facility	8

SOURCE: Directory of Colorado Health Facilities, May 1973, Colorado Department of Health.



TABLE 78 : HEALTH MANPOWER, 1972

	Arch uleta	Dol ores	La Plata	Monte zuma	San Juan	Region #0
Physicians (M.D. & D.O.)	2	0	32	8	1	43
Registered Nurses-practicing	0	1	111	42	2	156
Licensed Practical Nurses-practicing	0	0	86	16	2	104
Dentists	0	0	13	6	0	19
Optometrists	0	0	3	2	0	5
Chiropractors	0	0	3	1	0	4
Psychologists	0	0	1	0	0	1
Physical Therapists(1971)	0	0	1	1	0	2
Pharmacists (1971)	4	2	15	12	0	33
<hr/>						
Ambulance Vehicles	1	2	2	3	1	9
Drivers and Attendants						
Total	20	9	12	25	20	86
Advanced First Aid	20	0	0	1	20	41
Emergency Medical Tech- nicians	0	2	12	11	15	40

SOURCE: Demographic Profile, Colorado Department of Health, 1973.



### /3.9/ LAND USE

"A major portion of the private lands in the project area are used for livestock production, while public lands provide large amounts of recreation, timber production, livestock forage, wildlife habitat, watershed protection, and wilderness. While watershed protection is the principal value of public lands, the other uses are compatible with one another on the majority of the public lands.

Utilization of natural resources on federal land is an important factor in the area's economy. The lumber industry depends on federally-owned forests for much of its existence. The use of federally-owned grazing lands in conjunction with private lands is essential to many livestock operations.

Only about 9 percent of the area produces crops, hay, and irrigated pasture, but this acreage is vital to the economy. Most of the private, state, and Indian land is devoted to agricultural use; although there is a recent trend toward other uses.

Use of land for commercial recreation is rapidly expanding in parts of the project area. There is currently a strong trend toward subdividing farms and ranches into homesites. The shift of land from agriculture to other uses can be expected to increase. It is now most apparent in the Pagosa Springs, Bayfield and Durango areas, but will probably expand into localities not yet affected. While many tracts will serve as summer homes rather than permanent residences, others are being purchased for retirement homes or as residences for working families. In any case, demand for all community services and utilities will greatly increase and the need for domestic water, proper sewage disposal, fire and police protection will intensify.

Sound planning is essential if the land and water resources of the area are to be maintained and properly used. Soils previously used for agriculture will need to be re-evaluated, in many cases, for such uses as building sites or sewage disposal areas. Flood hazards pose a much greater problem if certain lands are converted from pasture to intensive human use. Destruction of plant cover in the construction of roads and building sites could lead to serious erosion and sedimentation problems. Irrigation water rights may be difficult to appropriate among small tracts. These water rights may best be used for other purposes.

Open space and scenic areas must be a planned part of home-site development, otherwise the features which attract people to the area will be largely lost. The possibility of converting an attractive rural landscape to unsightly urban



sprawl is great. There is also the possibility of partial development and abandonment of some tracts, leaving unsightly relics of past activity, disturbed land open to erosion, and a breeding ground for noxious weeds.

These and other problems must be considered before they reach serious proportions. Consideration must also be given to the maintenance of some agricultural areas. Commercial farming or ranching on a practical basis is difficult when surrounding areas are predominantly residential.\*\*

Maps applicable to this section have two sources (all copies located in Durango Area Office):

1. Colorado Land Use Commission series-
  - A. Land Ownership
  - B. Existing Land Use
  - C. Soil Shrink-Swell Potential
2. San Juan Resource Conservation and Development Project Plan
  - A. Land Ownership

Also refer to the land use chapter of the Comprehensive Plan (Preliminary) for La Plata County (1971) for projections of and guidelines for developing areas in that county.

Table 79 shows the extent of BLM and U.S. Forest Service acreages in the region. Since this 1970 data, 30 acres in Montezuma County have passed from BLM jurisdiction. It is noteworthy that 68 percent of San Juan County is held by either of the two agencies. BLM holds its largest percentages of county totals in San Juan and Montezuma Counties. Much smaller portions of Archuleta and La Plata Counties are under BLM control. Further investigation could tabulate acres of BLM-administered sub-surface mineral estate on private lands.

Tables 80 and 81 are taken from the Colorado Conservation Needs Inventory developed jointly in 1969 by the Colorado State Soil Conservation Board, the Colorado Association of Soil Conservation Districts, and the Soil Conservation Service of the U.S. Department of Agriculture. "The inventory is based on sample areas selected according to standard statistical procedures...Each of these sample land use and treatment needs estimates was enumerated and expanded by soil, slope, erosion, and land capability units to provide estimates land use and conservation treatment needs by defined groups of soils within the counties....

Users of this information should be aware, however, that the sample areas studied constituted only about two percent of the inventory land in each county. When sample area data

\*San Juan Resource Conservation and Development Project Plan, 1973.

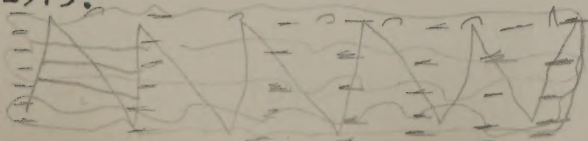




TABLE 79:

## BLM AND U.S. FOREST SERVICE ACREAGE, 1970

	TOTAL ACRES	BLM ACRES	U.S. FOREST SERVICE ACRES	OTHER ACRES
ARCHULETA %	872,960	10,457 1%	--*	862,503 99%
DOLORES %	656,640	55,244 8%	353,011 54%	248,385 38%
LA PLATA %	1,077,760	29,344 3%	394,588 37%	653,828 61%
MONTEZUMA %	1,340,160	188,960 14%	243,382 18%	907,818 68%
SAN JUAN %	250,240	48,720 19%	170,412 68%	31,108 12%
REGION #9 %	4,197,760	332,725 8%	1,161,393 28%	2,703,642 64%
COLORADO %	66,327,040	8,465,124 13%	14,361,432 22%	43,500,484 66%

\* Although no figure was given, U.S. Forest Service lands do occur in Archuleta County.

SOURCE: BLM Social-Economic Data System, 1970.



TABLE 80:

## LAND AREA, NON-INVENTORY, AND INVENTORY ACREAGES\*

	TOTAL LAND AREA	NON-INVENTORY ACREAGE			TOTAL	INVENTORY ACREAGE
		FEDERAL NON- CROPLAND	URBAN AND BUILT-UP	SMALL WATER AREAS		
ARCHULETA						
1958	872,960	428,189	4,747	630	433,566	439,307
1967	872,960	428,189	4,839	630	433,658	439,302
DOLORES						
1958	657,920	388,945	3,260	310	392,515	265,405
1967	657,920	388,945	3,255	310	392,510	265,410
LA PLATA						
1958	1,078,400	412,914	2,652	794	416,360	662,040
1967	1,078,400	412,914	3,668	794	416,376	662,024
MONTEZUMA						
1958	1,340,160	506,589	12,450	3,585	522,624	817,660
1967	1,340,160	506,589	12,335	3,585	522,509	817,651
SAN JUAN						
1958	250,880	249,135	820	0	249,955	925
1967	250,880	247,776	821	0	248,597	2,283
REGION #9						
1958	4,200,320	1,985,772	23,929	5,265	2,015,020	2,185,337
1967	4,200,320	1,984,413	24,919	5,265	2,013,650	2,186,670
COLORADO						
1958	66,485,760	22,989,787	972,375	52,264	24,014,426	42,467,089
1967	66,485,760	22,995,858	1,031,170	52,306	24,079,334	42,406,421

\* terms defined following Table 81

SOURCE: Colorado Conservation Needs Inventory, Soil Conservation Service, 1969.



TABLE 81 : LAND USE ACRES IN INVENTORY\*

	TOTAL INVENTORY	CROPLAND	PASTURE	RANGE	FOREST	OTHER LAND
ARCHULETA						
1958	439,307	21,000	---200,000---		212,307	6,000
1967	439,302	31,433	4,584	110,618	285,791	6,876
DOLORES						
1958	165,405	87,032	---75,542---		101,923	908
1967	265,410	100,000	21,712	66,328	75,893	1,477
LA PLATA						
1958	662,040	114,703	---155,150---		388,518	3,669
1967	662,024	81,566	77,885	220,577	275,583	6,413
MONTEZUMA						
1958	817,660	137,263	---307,551---		360,695	12,151
1967	817,651	148,102	61,106	284,668	310,975	12,800
SAN JUAN						
1958	925	0	---364---		0	561
1967	2,283	0	0	761	761	761
REGION #9						
1958	2,185,337	359,998	---738,607---		1,063,443	23,289
1967	2,186,670	361,101	165,287	682,952	949,003	28,327
COLORADO						
1958	42,467,089	12,616,994	---21,547,979---		7,787,958	514,158
1967	42,406,426	11,786,036	1,353,868	21,290,702	6,963,501	1,012,319

\* terms defined on following page

SOURCE: Colorado Conservation Needs Inventory, Soil Conservation Service, 1969.



## DEFINITIONS FOR TABLES 80 AND 81

Land Area - is the total area shown in the "Area Measurement Reports" (Census) and the 1964 Census of Agriculture adjusted if necessary to exclude areas inundated by the construction of large reservoirs. These measurements exclude all water areas of more than 40 acres and rivers wider than 1/8 mile.

Federal Land - includes all Federally owned land except cropland operated under lease or permit, and Indian lands under trusteeship but owned by individuals or tribes.

Urban and Built-up Areas - includes all cities, villages, and built-up areas of more than 10 acres. Industrial sites (except strip mines, borrow and gravel pits), railroad yards, cemeteries, airports, golf courses, shooting ranges, and all institutional and public administrative sites are also included.

Small Water Areas - includes ponds and lakes or more than two acres and not more than 40 acres, and rivers and streams that are less than 1/8 mile wide.

Inventory Acreage - is the acreage in each county or state after Federal land, urban and built-up areas, and water areas are deducted from the total land area of the county.

Cropland - Land currently tilled including cropland harvested, crop failure, summer fallow, idle cropland, cropland in cover crops or soil improving crops, and rotation pasture. It also includes tame hay or pasture, land in fruits or vegetables, and other land to which irrigation water is being applied, and acreage in the conservation reserve program. Irrigated cropland is that land to which water is usually applied by artificial means.

Pasture - Lands producing forage plants, principally introduced species, for animal consumption. Land where the management objective is to maintain stands of grasses alone or in mixtures with clover or other legumes are included regardless of treatment. Pastures may be on irrigated lands.

Range - is land on which the climax (natural potential) plant community is composed principally of grasses, grass-like plants, forbs, and shrubs valuable for grazing and in sufficient quantity to justify grazing use.

Forest Land - lands which are stocked at least 10 percent by forest trees that are capable of producing timber or other forest products or influencing the water regime. It also includes lands which formerly had at least 10 percent stocking of forest trees that has not been developed for a nonforest use and the oakbrush chaparral and other afforested areas of the western part of the state.

Other Land - Farmsteads, idle land, wildlife areas, strip mines and borrow areas, and other non-Federal rural areas that are not otherwise classified in the inventory.



was expanded to include all county acreage, some individual county land use and treatment needs may not be truly representative. The data for each county were reviewed by the local county conservation needs committee and adjustments were made when major deficiencies were observed.

The comparison of data for the years 1958 and 1967 will not shown absolute measure of change or established trends, because different land samples were used in each of the inventories. This is also partly due to the changes in definitions to allow for inventorying irrigated pasture, dryland pasture, and range as separate items in the 1967 inventory...

Major changes in land use [statewide] as shown in the inventory since 1958 are:

1. Increases of about 433,000 acres in irrigated cropland. The increase in irrigated acreage is primarily from the development of wells and sprinkler irrigation from the underground water resource in Eastern Colorado. The conversion to irrigated land has been on previously non-irrigated cropland and range.
2. Non-irrigated cropland has decreased about 644,000 acres because of increased irrigation and the conversion of cropland to pasture and range under the Soil Bank program and the Great Plains Conservation program.
3. There was a net increase in range of about 433,000 acres even though some rangeland was converted to irrigated cropland.
4. Forest and woodland showed a decrease of 824,000 acres. This is mostly because a different method was used in the 1967 inventory for estimating forest and woodland acreage. However, records for each county since 1962 indicate that some of the brushy lands classed as woodland are now in other uses including range, recreation, urban and suburban tracts.
5. Other land and urban land increased about 557,000 acres as a result of industrial expansion, housing and other facilities for a continuously increasing population at the expense of all previous land use.\*\*

Table 80 derives inventory acreage from total acreage by deletion of federal non-cropland, urban and built-up areas, and small water areas.

Table 81 indicates the importance of cropland, range, and forest as uses of land in the San Juan Basin. For a more detailed analysis, including treatment needs data for each inventory category, refer directly to Colorado Conservation Needs Inventory available on loan from the Soil Conservation Service in Durango.

\*Colorado Conservation Needs Inventory, Soil Conservation Service, 1969.



Conservation treatment needs are necessary "to overcome problems of erosion, soil condition, excess water or unfavorable climate. [Statewide] Fifty-two percent of the cropland acres are estimated to be needing treatment. The 1958 inventory estimated treatment needs of 69 percent. Forty-seven percent of the pasture and range needs treatment compared with an estimate of 73 percent in 1958. On all forest and woodland, the estimated acreage needing treatment amounts to 19 percent. However, 73 percent of the grazed woodland needs management practices to improve forage cover."\*

\*Colorado Conservation Needs Inventory, Soil Conservation Service, 1969



/4.0/ ENTITIES AND GROUPS

## /4.1/ GOVERNMENTAL SERVICES OFFICES

A. Archuleta County(in Arboles)Phone No.

U.S. Government:

none

Colorado State Government:

Game &amp; Fish Dept

883-2208

Navajo State Recreation Area

883-2208

Reformatory

883-2444

Archeluta County Government:

none

(in Pagosa Springs)

U.S. Government:

Dept. of Agriculture

Agriculture Stabilization &amp; Conservation

County Committee

968-5611

Forest Service

Eight Mile Lookout-S of P. Springs

968-2317

Pagosa Ranger District Offices

968-2268

Piedra Guard Station

968-5971

Piedra Ranger District

968-2268

Yellowjacket Guard Station-W of P. Springs

968-2254

Post Office

968-5440

Soil Conservation Service

968-5516

Colorado State Government:

Clerk District court

968-5932

Game and Fish Warden-Chimney Rock

968-5503

Highway Dept.

Chain Station, Wolf Creek Pass

968-5898

Judge

968-2400

Archuleta County Government:

A S C

968-5611

Assessor

968-5656

County Clerk

968-5633

Extension Agent Colorado State University

968-5931

Garage

968-5660

Sheriff

968-5555

Treasurer

968-2252

Welfare Department

968-5530



**Pagosa Springs City Government:****Phone No.**

Ambulance Service	968-2266
Fire Department	
to report a fire	968-2244
for all other calls	968-5502
Police Department	968-2266
Pump House	968-5698
Town Hall	968-5698

**B. Dolores County****(in Dove Creek)****U.S. Government:**

Dept. of Agriculture	
Agriculture Stabilization & Conservation	
County Committee	677-2229
Postal Service	677-2286

**Colorado State Government:**

none

**Dolores County Government:**

Assessor	677-2385
Clerk	677-2381
Commissioner	677-2383
District Judge	677-2382
Extension Service	677-2383
Health Nurse & Sanitarian	677-2387
Judge	677-2258
Sheriff	677-2257
Superintendent School Bldg. District RE 1	677-2522
Treasurer	677-2386
Welfare	677-2250

**Town of Dove Creek:**

Clerk	677-2255
Fire Dept & Ambulance Service	677-2500
Marshall	677-2478
Police Magistrate	677-2478

**(in Rico)****U.S. Government:**

U.S. Forest Service	967-2571
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**Colorado State Government:**

none

**Dolores County Government:**

none

**Town of Rico:**

Ambulance	967-2382
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ambulance, cont'd.

clerk  
Fire

Police

Phone No.

967-2502  
967-2474  
967-2781  
967-2474  
967-2382  
967-2514  
967-2401  
967-2403  
967-2723

C. La Plata County

(in Bayfield)

U.S. Government:

Dept. of Agriculture

Forest Service

Rine Ranger District Office  
Vallecito Guard Station N of  
Bayfield

884-2512

884-2621

Post Office

884-9918

Colorado State Government:

Brand Inspector-E of Bayfield

884-2755

La Plata County Government:

none

Town of Bayfield:

Fire Dept.

884-2444

Police Dept.

884-2222

Public Library

884-2222

(in Durango)

U.S. Government:

Dept. of Agriculture

Agricultural Stabilization & Conserva-  
tion

247-2415

Farmers Home Administration

247-2614

Forest Service

Animas Ranger District Office

247-5912

Columbine Station Cascade

247-5470

Durango Work Center

247-0725

La Plata Field Fire Base

247-1877

Supervisor, San Juan Nat. Forest

247-4874

Trimble Guard Station

247-3470

Soil Conservation Service

247-3449

Dept. of Health, Education, & Welfare

247-2797

Dept. of Interior

Bureau of Land Management Area Office

247-4082



Phone No.

## Dept. of Interior, cont'd.

Bureau of Reclamation Durango Projects  
Office  
Ute Mountain Tribe (Hesperus)  
Geological Survey  
Branch of Oil & Gas Operations  
Water Resources

247-0247  
385-4573

247-5144  
247-5975

Post Office  
Post Office (Hesperus)

247-3434  
385-4393

San Juan R C & D

247-1896

Selective Service Board No. 23

247-1351

Dept. of Transportation

Federal Aviation Administration

247-3116

## Colorado State Government:

Colorado State University San Juan Basin  
Research Center (Hesperus Unit Fort Lewis)

385-4574

Division of Wildlife

247-0855

Dept. of Employment

247-0308

Forest Service

247-5250

National Guard 2nd & 3rd Platoon

247-4167

Port of Entry - Bondad

247-5885

Public Defender

247-9284

Rehabilitation Dept.

247-3161

Revenue Dept.

247-3675

State Patrol

247-4722

Tri-County Head Start

247-5960

Water Resources Division Engineer

247-1845

Work Incentive Program

247-8933

## La Plata County Government:

Airport Manager

247-8143

Assessor

247-2346

Basin Health Unit

247-5702

Clerk

247-4100

Commissioner

247-4530

County Court

247-2004

Court Reporter

Frances Dowden

247-1301

Martha Simpson

247-2149

District Court Clerk

247-2304

District Judge

Byron Bradford

247-1301

William J. Eakes

247-2149

Exhibit Hall (fairground)

247-9216



Phone No.

## La Plata County Government, cont'd:

Fair Grounds	247-2308
Food Stamp Office	247-3572
Probation Officer	247-0982
Sheriff	247-1155
Social Services	247-3572
Surveyor	247-0851
Treasurer	247-4309
Veterans Service	247-5605
Visiting Nurse Service	247-5702
Welfare Dept.	247-3572

## City of Durango:

City Hall	247-5622
Fire Dept.	
to report a fire	247-1414
for all other calls	247-2152
Library	247-2492
Municipal Court	247-5622
Police Dept.	247-3232

(in Ignacio)

## U.S. Government:

PHS Indian Health Center	563-4563
Post Office	563-4322
Southern Ute Agency	
Administration Office	563-4511
Boys Dormitory	563-4228
Girls Dormitory	563-4559

## Colorado State Government:

none

## La Plata County Government:

none

## Ignacio City Government:

City Hall	563-4223
Fire Department	563-4223
Police Department	563-4206

## Southern Ute Community Action Program

Executive Director	563-4517
Head Start	563-4224
Emergency Food & Medical Service	563-4561
Senior Opportunity	563-4561
Community Services Center	563-4561

D. Montezuma County(in Cortez)

## U.S. Government:

Dept. of Agriculture	
Farmers Home Administration	565-3170



Phone No.

## U.S. Government, cont'd:

## Dept. of Agriculture, cont'd:

Forest Service

Soil Conservation Service

565-7854

Agricultural Stabilization & Conservation  
Service

5657263

## Dept. of Interior

Bureau of Indian Affairs

Ute Mountain Agency - Superintendent  
(Towaoc)

565-3472

Mesa Verde National Park-Mesa Verde  
(Superintendent & Asst Superintendent)

529-4542

Post Office

565-3181

## Dept. of Transportation

Federal Aviation Administration

565-7509

## Colorado State Government:

County Clerk

565-7580

District Court Clerk

565-7879

Employment Dept.

565-3759

National Guard 928th Med. Company

565-7651

Probation Officer

565-7216

## Dept. of Revenue

Driver's License

565-9779

Port of Entry

565-9420

State Patrol

565-7444

## Montezuma County Government:

Assessor

565-3428

Civil Defense

565-3343

Clerk &amp; Recorder

565-3728

Commissioners

565-7484

County Court Clerk (see Colo. St. Govt.)

District Court Clerk (see Colo. St. Govt.)

Extension Service

565-3123

Health Department

565-3056

Planning Office

565-8317

Sheriff

565-3701

Social Services

565-3769

Food Stamp Certification &amp; issuance office

565-3769

Treasurer

565-7550

Veteran Service Office

565-7155

## Cortez City Government:

Building Inspector

565-3403

City Engineer

565-3403

City Manager

565-8575

Clerk

565-3402

Fire Dept.

to report a fire

565-3131

for all other calls

565-3157

Golf Course

565-9208



Phone No.

## City of Cortez Govt, cont'd:

Jail	565-3224
Library	565-8117
Municipal Court	565-7952
Police Dept.	565-3784
Sewer Plant	565-3962
Water Treatment Plant	565-9824

(in Dolores)

## U.S. Government:

Dept. of Agriculture	
Forest Service	
Dolores Ranger District Office	882-4600
Post Office	882-7796
Lewis	882-4631
Ute Mountain Tribe of Indians	882-4695

## Colorado State Government:

Colorado State University San Juan Basin	
Research Center, Arriola	882-4246
Game & Fish	882-7804

## Montezuma County Government:

none

## Dolores City Government:

Fire Dept.	
To report a fire	882-7737
For all other calls	882-7720
Marshall	882-4656
Town Hall	882-7720

(in Mancos)

## U.S. Government:

Dept. of Agriculture	
Forest Service	
Mancos Ranger District Office	533-7716
Dept. of Interior	
Ute Mountain Tribe of Indians	
Ranch 1	533-7450
Ranch 2	533-7629
Post Office	533-7754

## Colorado State Government:

none

## Montezuma County Government:

none



**Mancos Town Government:**Phone No.

Clerk	533-7773
Fire Department	533-7701
Marshall	533-7761

(in Pleasant View)**U.S. Government:**

Post Office	
Cahone	562-3221
Pleasant View	562-2501
Yellowjacket	562-2452

**Colorado State Government:**

none

**Montezuma County Government:**

none

**Pleasant View Town Government:**

Fire Department	562-2227
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E. San Juan County(in Silverton)**U.S. Government:**

Post Office	387-5402
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**Colorado State Government:**

Highway Dept.	387-5482
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**San Juan County Government:**

Assessor	387-5632
Clerk	387-5671
District Court Clerk	387-5790
Judge	387-5505
Sheriff	387-5531
Treasurer	387-5488
Welfare Department	387-5631

**Silverton Town Government:**

City Hall	387-5522
Fire Department	387-5411
Library	387-5770
Police Dept.	387-5522



#### /4.2/ INTEREST GROUPS

Listed here are non-governmental groups possibly concerned with activities in the San Juan Basin, compiled with the aid of an unpublished notebook of Bill Reynolds (Montrose District Office) and Fred Bassett's Upper Colorado Mainstream Region, Social-Economic Profile, (WICHE for BLM, 1973). Refer to Bassett's report for a more detailed list of statewide organizations. Further investigation could complete this partial listing, for example, through the checking of groups connected with Fort Lewis College and of mineral and grazing federal lease holders. Interest groups are subdivided into the four categories of conservation and wildlife, outdoor recreation minerals, and range cattle and sheep.

##### Conservation and Wildlife:

American Canoe Association  
4260 E. Evans Avenue  
Denver, Colorado 80222

Audobon Society of Western Colorado  
P.O. Box 1211  
Grand Junction, Colorado 81501

Colorado Citizens for Clean Air  
1742 Pearl Street  
Denver, Colorado 80203

Colorado Environmental Legal Services  
1325 Delaware Street  
Denver, Colorado 80204

Colorado Mountain Club  
1723 East 16th Avenue  
Denver, Colorado 80218

Colorado Open Space Council  
1325 Delaware Street  
Denver, Colorado 80204

Colorado River Skippers  
Clair C. Short  
3158 E $\frac{1}{2}$  Road  
Grand Junction, Colorado 81501

Colorado Sportsmen's Association  
Box 1005  
Adams City, Colorado 80022

Colorado State University Environmental Corps  
P.O. Box 304, Student Center  
Colorado State University  
Fort Collins, Colorado 80521

Colorado WhiteWater Association  
2007 Mariposa  
Boulder, Colorado 80302



National Wildlife Federation  
7105 41st Street  
Boulder, Colorado 80303

The Nature Conservancy  
350 Ponca Place  
Boulder, Colorado 80303

Rocky Mountain Center on Environment (ROMCOE)  
4260 East Evans Avenue  
Denver, Colorado 80222

Rocky Mountain Sportsman Federation  
P.O. Box 52  
Westminster, Colorado 80030

Rocky Mountain Trail Association  
1465 Lucille Court  
Broomfield, Colorado 80020

\*San Juan Ecological Society, Inc.  
Durango, Colorado 81301

\*San Juan Historical Society, Inc.  
Silverton, Colorado 81433

\*Sierra Club  
Durango, Colorado 81301

State Historical Society  
200 14th Avenue  
Denver, Colorado 80203

Thorne Ecological Institute  
2305 Canyon Blvd.  
Boulder, Colorado 80302

Trout Unlimited  
4260 East Evans Avenue

University of Colorado Wilderness Group  
Room 183-B

University Memorial Center  
Boulder, Colorado 80302

Westslope Environmental Coordinating Center  
308 North Main  
Gunnison, Colorado 81230

\*Wilderness Club  
Vallecito, Colorado

The Wilderness Society  
Clifton R. Merritt  
4260 East Evans Avenue  
Denver, Colorado 80222

Wildlife-2000  
One Executive Park Building, Suite 20  
Denver Technological Center  
7801 Bellevue Avenue Englewood, Colorado 80110



Colorado Wildlife Federation  
P.O. Box 22193  
Denver, Colorado 80212

Conservation Library  
Kay Collins  
1357 Broadway  
Denver, Colorado 80203

Environmental Action of Colorado  
University of Colorado, Denver Center  
1100 14th Street  
Denver, Colorado 80204

Environmental Defenders, Inc.  
250 W. 14th Avenue  
Denver, Colorado 80204

Environmental Defense Fund  
Capital Life Center  
Denver, Colorado

Environmental Resource Center  
Colorado State University  
Fort Collins, Colorado 80521

Friends of the Earth  
Rt. 2, Box 437  
Evergreen, Colorado 80439

Izaak Walton League of America, Inc.  
7360 W. 13th Avenue  
Denver, Colorado 80220

Keep Colorado Beautiful  
4260 East Evans Avenue  
Denver, Colorado 80222

\* La Plata County Historical Society  
P.O. Box 1311  
Durango, Colorado 81301

\* Learning Environment, Inc.  
Florida Road  
Durango, Colorado 81301 247-3620

Mile-Hi Alpine Club  
Rt. 1, Box 656  
Evergreen, Colorado 80439

National Council on Public Land Users  
P.O. Box 811  
Grand Junction, Colorado 81501

National Resources Defense Council, Inc.  
1710 N Street, N.W.  
Washington, D.C. 20036



Minerals:

- Atlas Minerals  
William Collins  
910 Security Life Building  
Denver, Colorado 80202
- \* Barge, E.M. (consulting geologist)  
West Building  
Durango, Colorado 81301
- \* Butler, Charles R. (consulting geologist)  
P.O. Box 435  
Durango, Colorado 81301 247-1092
- \* Colorado Mining Association  
Charles R. Butler(see above)- representative for Archuleta and La Plata Counties.  
  
Colorado School of Mines  
Raymond Bisque  
Golden, Colorado 80401
- \* Dixilyn Corporation  
Howardsville, Colorado 81433 387-5592
- \* Exxon Company, U.S.A.  
1560 East 2nd Avenue  
Durango, Colorado 81301 247-2138
- Frontier Resources, Inc.  
Suite 511  
899 Logan Street  
Denver, Colorado 80203
- The Hanna Mining Company  
C.A. David  
2896 South Main Street  
Salt Lake City, Utah 84115
- \* Johnson, Fred M. (consulting geologist)  
777 Main Avenue  
Durango, Colorado 81301 247-0118
- \* Latch, Billy F. (consulting geologist)  
730 Main Avenue  
Durango, Colorado 81301 247-5050
- Noradex, Inc.  
Dr. Robert Miller  
P.O. Box 15638  
780 Simms Street  
Denver, Colorado 80215
- Rocky Mountain Oil and Gas Association  
Ken Monroe  
Room 940 Petroleum Club Building  
Denver, Colorado 80202



- \* Standard Metals Corporation  
Silverton, Colorado 81433 387-5533
- Tenneco Oil Company  
J.F. McCormick, Drilling Engineer  
Denver, Colorado 292-9920
- \* Texaco, Inc.  
150 W. 7th  
Durango, Colorado 81301 247-0479
- \* Tripp, W.D.  
Mining Co.  
807 Cherry  
Cortez, Colorado 81321 565-7268
- Union Carbide Corporation  
P.O. Box 1049  
Grand Junction, Colorado 81501
- \* Union Oil of California  
West Building  
Durango, Colorado 81301 247-4300
- Utah Independent Miners and Claim Owners Association  
Joe Starks, Chairman  
Moab, Utah 84532
- \* Western Assessment Company  
Silverton, Colorado 81433 387-5647



Range Cattle and Sheep:

Colorado Cattlemen's Association  
Public Land Committee  
4675 Lafayette  
Denver, Colorado 80216

Colorado Farm Bureau  
2211 West 27th Avenue  
Denver, Colorado 80211

Colorado Woolgrowers Association  
Livestock Exchange Building  
E. 47th and Lafayette  
Denver, Colorado 80216

## \*Grazing District (3A) Advisory Board, 1974:

William Bray,  
Redvale, Colorado 81431

Fred A. Cline  
Dolores, Colorado 81323

John A. Gally, Jr.  
Nucla, Colorado 81424

Douglas H. Hindmarsh  
Dolores, Colorado 81323

Lawrence R. Huntington  
Rt. 1, Box 195  
Hesperus, Colorado 81326

Roy J. Retherford  
Lewis, Colorado 81327

Wayne Rogers  
Rt. 1, Box 61 B  
Cortez, Colorado 81321

Sandy Scott  
Drawer 0  
Aztec, New Mexico 87410

Raymond Snyder  
Norwood, Colorado 81423

Charles A. Stilwell  
295 W. 19th Street  
Durango, Colorado 81301

James Suckla  
Rt. 1 Box 114  
Cortez, Colorado 81321



Outdoor Recreation:

American Camping Association  
1375 Delaware  
Denver, Colorado 80204

American Motorcycle Association  
James Nidiffer  
P.O. Box 20064  
Denver, Colorado 80220

## \* Local Chambers of Commerce:

Archuleta  
Pagosa Springs, Colorado 81147 968-2360

Cortez  
808 East Main  
Cortez, Colorado 81321 565-3414

Durango  
2301 Main Avenue  
Durango, Colorado 81301 247-0312

Silverton  
1233 Empire  
Silverton, Colorado 81433 387-5429

Vallecito  
884-9265

Club 20  
Box 550  
Grand Junction, Colorado 81501

Colorado Association of Snowmobile Clubs  
Jerry Webb  
P.O. Box 26153  
Denver, Colorado 80226

Colorado Four-Wheel Drive Clubs, Inc.  
Bill Voss, President  
917 E. Harmony Road  
Fort Collins, Colorado 80521

Colorado Guide and Outfitters Association  
1162 Gunnison Avenue  
Grand Junction, Colorado 81501

Colorado Parks and Recreation Society  
1800 W. Littleton Boulevard  
Littleton, Colorado 80120

Colorado West Racing Association  
Harold Delfelder  
P.O. Box 2331  
Grand Junction, Colorado 81501

\* Durango Jeep Tours  
Durango, Colorado 81301 247-1812



- \* Gray Line of Durango  
479 Main Avenue  
Durango, Colorado 81301 247-2733
- \* Klatt Travel, Inc.  
699 Main Avenue  
Durango, Colorado 81301 247-4455
- National Four-Wheel Drive Association  
Jim Hefner  
1740 E. 17th Avenue  
Denver, Colorado 80218
- Recreational Use of Public Land  
Robert L. Chadbourne  
320 E. Uintah  
Colorado Springs, Colorado 80903
- Rocky Mountain Area Snowmobile Association  
P.O. Box 53  
Marshall, Colorado 80468
- Rocky Mountain Trail Association  
1465 Lucille Court  
Broomfield, Colorado 80020
- \* Timberline Outfitters  
Durango, Colorado 81301 247-1873
- Western Colorado Motocross  
Donald Dustako  
P.O. Box 38  
Telluride, Colorado 81435

\* based within Region 9



#### /4.3/ STATUS OF PLANNING

##### A. Regional Planning Commissions

San Juan Regional Planning Commission (for Region #9) coordinates the activities of the Upper San Juan Regional Planning Commission, the Animas Regional Planning Commission, the Southern Ute Comprehensive Planning Committee, the Montelores Planning Group, and the San Juan Regional Planning Commission-Silverton. W.F. Gibbons directs this coordination effort. Region #9 by choice has no Council of Governments. Gibbon's office in Durango functions in a similar role though with different directives. Table 82 lists the current members of the San Juan Region #9 Planning Commission. In accordance with State legislation, subdivision regulations are in effect throughout Region #9. However, the extent of variation in enforcement from county to county is not known. Although the situation in each county is distinct, the various planning commissions are experiencing similar situations. All are grappling with physical problems more than with the problems created by masses of high density in less rural areas. Local politics expresses itself in each of the planning commissions. A planner works around it, through it, and with it on the basis of personal experience. The planning commissions are necessarily concerned with economic development of their respective areas.

Also, each planning commission is beginning to utilize the tool of zoning. Zoning is a means to segregate uses of land. Initial zoning has been largely reflective of existing land use patterns. Without further definition, such practice may freeze development into these existing patterns as opposed to incorporating alternative design themes. Zoning is an effective population density regulator. Variances such as Planned Unit Developments (PUD) are sometimes used as loopholes by developers, but can also help to circumvent standardization to permit the best utilization of a specific area.

##### Upper San Juan Regional Planning Commission (Archuleta County):

This commission is in the process of hiring a new planner, though the office continues to function under Sybil Micha, Technical Assistant. The new planner should have abilities as a land administrator. Zoning in Pagosa Springs went into effect September 12, 1963 (copy of ordinance located in Durango Area Office). County zoning and mobile home regulations are presently being reviewed by the County Commissioners. In February, 1974, An Overall Economic Development Program for Archuleta County, Colorado was published. A copy is located in the Durango Area Office. The county has seen widespread subdividing in recent times.

##### Animas Regional Planning Commission (La Plata County):

Copies of zoning ordinances in effect county-wide may be obtained from the Regional Planner, Lynn Vandegrift, at his office in Durango City Hall. The Durango City Council



TABLE 8a :

## SAN JUAN REGION #9 PLANNING COMMISSION

Representing:

Harold Schutz \* (Chromo)----- Archuleta County  
 James Cloman \*-----Pagosa Springs  
 Ed Baird \*-----Dolores County  
 Robert Thompson \*-----Dove Creek  
 Jack Curran-----Rico  
 Andrew Fletcher \*-Treasurer-----La Plata County  
 John Murphy \*-----Durango  
 William Bobb-----Bayfield  
 Joseph Romero-----Ignacio  
 Clay Bader \* (Mancos)-----Montezuma County  
 Halworth Tanner \* -Chairman-----Cortez  
 Val Truelsen-----Dolores  
 Dale Frederick-----Mancos  
 Frederick Andersen \*-----San Juan County  
 Vincent Tookey \*-----Silverton

\*Administrative Committee

SOURCE: office of W.D. Gibbons, 1974.



helps appoint the Planning Commissioners, thereby solidifying its ties with the regional commission. The county is divided into zones, such as Florida Comprehensive Zone and SE Durango Comprehensive Zone, each of which draws up its own local comprehensive plans to be submitted for approval. Subdivision development is a fact of life, but not without objections from surrounding land owners vocalized in the meetings of the Planning Commission and County Commissioners. An example is found in a request that an adjacent new subdivision put utility lines underground. Since this is not required in present regulations, the Planning Commission attempts to open avenues of discussion and compromise between the neighbor and the developer. Publications connected with the commission and on file in the Durango Area Office include Official Zoning Resolution (May, 1972), Official Subdivision Regulations (June, 1971), Comprehensive Plan (preliminary) for Durango Urban Area, and Comprehensive Plan (preliminary) for La Plata County (May, 1971).

Southern Ute Comprehensive Planning Committee (parts of La Plata and Archuleta Counties):

The Southern Ute Indian Tribe is a self-governing body. The first overall increment of its Comprehensive Plan was issued in March, 1973 by this strong, active planning group. This document is on file in the office of the Animas Regional Planning Commission in Durango. Zoning is in effect.

Montelores Planning Group (Montezuma and Dolores Counties):

Although these two counties have separate Planning Commissions, David Denton, in an atmosphere of mutual cooperation, acts as planner for both counties and even represents municipalities when called upon to do so. Zoning is not yet resolved in either county, but exists in the municipalities of Cortez, Dolores, and Dove Creek. Rico is beginning to consider zoning as well as the installation of a central sewer system. Denton is assisting with grant proposals. Subdividing is being experienced in Montezuma County. Although none has occurred in Dolores County, the prospect is near. Economic Base Study-Montelores Subregion by Joseph Andrus (WICHE, 1972) is a publication connected with the Montelores Planning Group (copy located in Durango Area Office). Denton feels that the area is coping with trends as they come, while striving to create much needed economic opportunities.

San Juan Regional Planning Commission-Silverton (San Juan County):

This Planning Commission is in the process of hiring a Planner. It is also reviewing a proposed Comprehensive Plan (copy located in the Region #9 Planning Commission Office) as well as a Capital Improvement Program (May, 1974) developed by the Oblinger-Smith consulting firm in Denver. Zoning for Silverton was established on April 26, 1971 (copy of ordinance located in Durango Area Office). The geographical



isolation of the county rubs off on the workings of the Planning Commission. Although they are in contact with Mr. Gibbons in Durango, they are involved little in the operations of the other county groups. The Planning Commission seems to recognize what needs to be done, then sets about doing it. With regard to BLM and the U.S. Forest Service, keen interest exists in strict enforcement of existing regulations concerning mining roads (due to increasing mineral exploration in the county).



## B. Status of Planning Checklist

In order to complete a Status of Planning checklist for entities (mostly governmental) somehow involved in the planning for and development of the San Juan Basin, a letter with an attached Status of Planning Checklist outline was sent directly to each entity. The letter, outline, and responses can be found on the next few pages. Letters were sent to the following entities but no responses were received (reasons unknown, but possible explanations include non-applicability or lack of time needed to answer):

U.S. Geological Survey  
Branch of Oil & Gas Operations & Water Resources  
Jarvis Building, Durango, Colorado 247-5144, 5975

Colorado Division of Planning  
1575 Sherman Denver, Colorado 80203

Public Utilities Commission  
1845 Sherman Denver, Colorado 80203

Four Corners Economic Development Commission  
Petro Plaza Building  
Farmington, New Mexico 87401

Animas Regional Planning Commission  
Lynn Vandegrift, Regional Planner  
949 2nd Avenue  
Durango 81301 247-5622

San Juan Regional Planning Commission (Silverton)  
Alfred Klinke, Chairman  
Box 2 Silverton, Colorado 81433

Jicarilla Apache Agency  
Mr. Hubert Velarde, President  
Jicarilla Apache Tribe  
Dulce, New Mexico 87528

Ute Mountain Tribe  
Scott Jacket  
Towaoc, Colorado 81334 565-3751

Region 9 Community Services  
Hildo Lister  
1901 Main Avenue Durango, Colorado 81301

Colorado Ute Electric Association, Inc.  
Montrose, Colorado 81401

La Plata Electric Association, Inc.  
P.O. Box 180 Durango, Colorado 81301

San Miguel Power Association, Inc.  
Nucla, Colorado

Western Colorado Power Company  
1235 Camino Del Rio Durango 81301 247-1135  
Attn: Mr. H.A. Thompson



Dolores County Commissioners  
 Courthouse  
 Dove Creek, Colorado 81324

La Plata County Commissioners  
 Harvey Hellar, Chairman  
 1060 2nd Avenue Durango 81301 247-4530

Montezuma County Commissioners  
 Court House  
 Cortez, Colorado 81321 565-7484

Rio Arriba County Commissioners  
 Chairman  
 Tierra Amarilla, New Mexico 87575

San Juan County Commissioners  
 Court House  
 Silverton 81433

Town of Bayfield  
 William Bobb, Mayor  
 Bayfield, Colorado 81122 884-2222

Town of Dolores  
 V.T. Boyd, Mayor  
 420 Central Avenue Dolores, Colorado 81323 882-7720

Town of Dove Creek  
 Robert Thompson  
 Town Office, Dove Creek, Colorado 81324 677-2500

City of Durango  
 Ned Wallace, Mayor  
 949 2nd Avenue Durango, Colorado 81301 247-5622

Town of Ignacio  
 Joseph Romero, Mayor  
 540 Goddard Avenue, Ignacio, Colorado 81137 563-4223

Town of Mancos  
 Lyle Cox, Mayor  
 113 N. Main, Mancos, Colorado 81328 533-7773

Town of Pagosa Springs  
 Jim Cloman, Mayor  
 Town Hall Pagosa Springs, Colorado 81147 968-5698

Town of Rico  
 Mayor  
 Rico, Colorado 81332 967-2781

Town of Silverton  
 Vincent Tookey, Mayor  
 1360 Greene, Silverton, Colorado 81433 387-5522

Table 83, preceding the Status of Planning Checklist, related a partial listing of planning entities to BLM planning units.



TABLE 83 : PLANNING ENTITY RELATIONSHIPS (PARTIAL)

Planning Entity	Tributary Planning Group	Sub-Tributary Planning Group	BLM Planning Unit
Region # 9	Montelores Regional Planning Commission	Montezuma County Planning Commission	Dove Creek Sacred Mountain
		Dove Creek Planning Commision (Town)	Dove Creek
		Cortez Planning Commission (Town)	Sacred Mountain
	Animas Regional Planning Commission		Durango
		Durango Planning Commission (Town)	Durango
	San Juan Regional Planning Commission		None in San Juan R. A.
	Upper San Juan Regional Planning Commission		Chromo
Region # 10	Tri-County Regional Planning Commission	San Miguel County Planning Commission	Dove Creek
U.S. Forest Service	San Juan National Forest		Dove Creek Sacred Mountain Durango Chromo
National Park Service	Mesa Verde National Park		Sacred Mountain
Ute Tribes	Ute Mountain	Hovenweep National Mt.	Sacred Mountain
	Southern Ute		Sacred Mountain Durango Chromo



# PLANNING ENTITY RELATIONSHIPS, cont'd.

Planning Entity	Tributary Planning Group	Sub-Tributary Planning Group	BLM Planning Unit
U.S. Bureau of Reclamation	Durango Projects Office	Dolores Project Animas-La Plata	Sacred Mountain Durango
4-Corners Econ. Develop. Comm R, C, & D.	San Juan Basin		All Units All Units
BLM, Utah Region 6 Rural Affairs Council	Monticello District		Sacred Mountain All Units

SOURCE: Bill Reynolds, Montrose District Office.





# United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Resource Area Headquarters  
1211 Main Avenue  
Durango, Colorado 81301

July 23, 1974

Dear Friends:

I am presently working on a social-economic analysis of the San Juan Basin (Colorado Planning Region #9: Archuleta, Dolores, La Plata, Montezuma, and San Juan Counties) as part of BLM's planning process, determining the best use of BLM lands in this area. Part of my work includes making contacts with other planning entities in order to determine what job you are doing in what area and to what extent relationships and coordination with BLM do and/or should exist.

I feel that the different groups involved in planning should describe themselves. This will reduce the extent of my own personal interpretation, giving a more diverse and more realistic picture of planning in this area. Attached is a 2-page "Status of Planning Checklist". Please provide me with the information outlined there, where applicable. It need not be lengthy, but should adequately and accurately represent your planning role. This information will be included directly in my report.

Should you have any questions regarding either my work in general or the "Status of Planning Checklist" in particular, feel free to contact me at the BLM (phone: 247-4082) in Durango. Due to my own deadline, I hope that this information can be returned to my office by August 1, 1974.

Thank you very much for your cooperation.

Vicki Hayes  
Bureau of Land Management  
1211 Main Avenue  
Durango, Colorado 81301



## BUREAU OF LAND MANAGEMENT: STATUS OF PLANNING CHECKLIST OUTLINE

NOTE: List information related to the following items as briefly as possible for all Federal, State, regional, local and other agencies or governmental units. Supplementary information may be accumulated in an appendix.

All information should be oriented to the development of items No. 8,9, and 10.

1. Name of Agency or Governmental Unit.
2. Description of Agency (type, purpose and geographic area of interest).
3. Form of Management or Government.
4. Name, title, address and telephone number of official for BLM contact.
5. Planning Status  
For each plan either in effect or realistically pending, complete items 1-5, if possible.
  - a. Plans in effect.
    - (1) Type of Plan
    - (2) Scope and/or area of Plan
    - (3) Date Plan Prepared
    - (4) Author of Plan
    - (5) Status of Associated Land Use or Planning Maps
  - b. Plans Pending Implementation  
(Repeat 1-5, as above)
6. Zoning Status
  - a. Zoning Authority (Yes or No, date of initiation)
  - b. Type of zoning (describe)
  - c. Does zoning follow planning? (Yes or no and brief explanation)
7. Other Controls, Codes or Ordinances (explain as necessary)
  - a. Subdivision Regulations
  - b. Dumps and junkyard control (solid waste disposal)
  - c. Road or Utility Corridor Designation
  - d. Other - Environmental or Pollution Codes or Ordinances
8. Effect or impact of above described plans on BLM managed lands, resources or programs.
9. Existence of memorandums of understanding, other agreements and current working relationships.
10. Differences between current agreements or relationships and those desired. (Coordination needs.)



There follows a list of entities who did manage to respond:

USDA, San Juan National Forest  
USDA, Soil Conservation Service, Resource Conservation & Development Project  
USDA, Soil Conservation Service  
USDA, Soil Conservation Service, Cortez Field Office  
USDA, Soil Conservation Service, Pagosa Springs  
USDI, Bureau of Reclamation, Western Colorado Projects Office, Durango Planning Field Division, Durango.  
USDI, National Park Service, Mesa Verde National Park

Colorado State Forest Service  
Colorado State Department of Highways  
Colorado Division of Parks and Outdoor Recreation  
Colorado Division of Water Resources  
Colorado Division of Wildlife

San Juan Basin Regional Planning Commission Region 9  
Montelores Planning Group  
Upper San Juan Planning Commission (answers also apply to Archuleta County Commissioners)  
Southern Ute Tribe  
Southwest Colorado Comprehensive Health Planning Council, Inc.  
Empire Electric Association

Thank you.



## STATUS OF PLANNING CHECKLIST

## 1. San Juan National Forest, USDA

4. H. Peter Wingle  
Forest Supervisor  
San Juan National Forest  
P.O. Box 341  
Durango, Colorado 81301  
247-4874

Land use planning on the San Juan National Forest is within the framework made by the laws of the United States and the regulations governing the U.S. Department of Agriculture. These acts and regulations are many. Key among them are the Organic Act of 1897 that gives the U.S. Forest Service authority to protect and manage the National Forests; the Multiple Use Act - Sustained Yield Act of 1960 that specifies sustained yield management of water, forage, recreation, wood and wildlife; and the National Environmental Policy Act of 1969.

Our planning is coordinated with national and regional goals for goods, services, and social benefits. These goals are identified for the most part, by federal and state planning efforts. At the local level we work closely with county and regional planning entities (particularly Colorado Planning Region 9) to mesh with local planning needs. The advent of Colorado House Bills 1041 and 1034 has made stronger our tie with county and regional planning.

The Forest Service has formal working agreements with other federal agencies. An example is the management of National Forest lands coincident with the administration of 1872 mining laws. The Bureau of Land Management administers the mining law while the U.S. Forest Service manages the surface resources until a mining claim goes to patent. There are many other formal and informal working agreements between offices and individuals of the Forest Service and the Bureau of Land Management in managing wood, water, forage, wildlife, recreation, and road building and maintenance on adjoining federal lands.

Often, state agencies are part of these cooperative planning efforts. An example is the coordination meetings with the Colorado Department of Wildlife concerning wildlife habitat and recommendations for seasons and harvest of game species.

In the San Juan Basin, we have monthly interagency meetings, in the winter, with other federal agencies to keep informed of current and planned activities. We work with the tribal councils at the Southern Ute and Ute Mountain Ute Indian Tribes and the Four Corners Planning Commission.

Currently the San Juan National Forest planning activity is directed toward broad land allocations of management of rather large areas. Of ten of these planning units on the San Juan



National Forest, we are working on three. Public involvement is a key part of this planning process, including soliciting input of inventory information from ad hoc citizen committees, personal contact with other agencies and local planners, news media coverage and public meetings. Land allocations within these planning units will be written up in environmental impact statements.

The planning process is a day-by-day activity in on-going project level work such as timber sales and management of wilderness and roadless areas.

On the eastern end of the San Juan Basin, we are working jointly with the Rio Grande National Forest on a planning unit encompassing four roadless areas designated by the Chief of the Forest Service for further study related to possible inclusion of these areas into the National Wilderness Preservation System. Wilderness allocation recommendations are considered, along with other allocations, in all planning units with roadless and undeveloped areas.



## STATUS OF PLANNING CHECKLIST

1. United States Department of Agriculture-Soil Conservation Service, Resource Conservation and Development Project.
2. Orderly development and use of Natural Resources for community improvement.
3. --
4. Joe Brown, Project Coordinator  
Box 179  
Durango, Colorado  
303-247-1896
5. a.
  1. Project Plan
  2. Natural Resources--General
  3. January, 1973
  4. Local people
  5. Location, Land Ownership, Population Density, Minerals, Water Resources, Annual Ppt., Critical Erosion, Cropland and Vegetation cover, Public Outdoor Recreation.b. --
6. a. None  
b. --  
c. Yes, zoning is a tool for implementing a good plan.
7. --
8. None
9. None
10. --



## STATUS OF PLANNING CHECKLIST

1. Soil Conservation Service      USDA.
2. The SCS gives technical assistance to individuals, groups, organizations, cities and towns, and county and state governments in reducing waste of land and water resources. The objective is use and conservation treatment of the land within its capability and needs. The Durango Field Office geographical area of interest is La Plata County, San Juan County, and a portion of the southwest corner of Archuleta.
3. Federal Government
4. Charles A. Betts, District Conservationist  
Soil Conservation Service  
P.O. Box 1619      110 E. 15th street  
Durango, Colorado 81301
5. Not Applicable
6. None
7. a. We review Subdivision Plats for the La Plata and Pine River Soil Conservation Districts.  
b. No responsibility given  
c. "                                  "                                  "  
d. "                                  "                                  "
8. None
9. BLM and SCS will cooperate in resource planning on operating units made up of intermingled BLM public land and lands controlled by Soil Conservation District Cooperators.
10. No differences.



## STATUS OF PLANNING CHECKLIST

1. Soil Conservation Service  
Cortez Field Office  
Cortez, Colorado
2. Serve the Dolores, Dove Creek and Mancos. SCD's covering all of Montezuma and Dolores Counties and the westend of San Miguel. Conservation of Natural Resources.
3. Federal Government
4. Roy Roper, District Conservationist  
Box 698  
Cortez, Colorado  
303-565-7854
5. a. Six plans in effect in 116,802 acres.
  1. Ranch Conservation Plans. (Individual ranchers).
  2. A coordinated SCS-BLM range resource plan was developed for the orderly use and development of the range resources.
  3. --
  4. These were authored by SCS personnel but management is by the BLM personnel.
  5. --b. We do not have any immediate pending plans, but there are several that may be developed in the future.
6. No
7. We assist the SCD with Subdivision plan review
8. The plans are helping in development and management of the natural resources with certain expertise provided by both agencies and a personal involvement by the permittee.
9. The Dolores and Dove Creek SCD's each have a memorandum of understanding with USDI and a Supplemental Memo with the BLM.
10. None



## STATUS OF PLANNING CHECKLIST

1. Soil Conservation Service  
Box 458  
Pagosa Springs, Colorado 81147
2. USDA serving Archuleta County and that portion of Hinsdale and Mineral County south of Continental Divide.
3. Government
4. James W. Swartz, District Conservationist  
Box 458  
Pagosa Springs, Colorado 81147  
303-968-5516
5. We do not do any planning on BLM lands. If consulted we will give suggestions but that is the extent of our work on BLM land.
6. None - We have no zoning authority.
7. a. We review subdivision plats and make recommendations.  
b. None  
c. "  
d. "
8. --
9. Soil Conservation Service assists Soil Conservation Districts. There is currently no memorandum of understanding between BLM and the Soil Conservation District.
10. Very little contact with BLM but past relations have been satisfactory.



## STATUS OF PLANNING CHECKLIST

1. U.S. Bureau of Reclamation, Western Colorado Projects Office, Durango Planning Field Division, Durango, Colorado
2. The Bureau of Reclamation has primary Federal responsibility for developing and managing water and related land resources in the 17 contiguous western States. This responsibility for the western half of Colorado within the Colorado River Basin rests with the Western Colorado Projects Office. Plans for three multi-purpose and two Colorado River Salinity Control Projects within the southwest quarter of the State are currently being formulated by the Durango office; namely the Dolores, Animas-La Plata, and San Miguel Projects are multi-purpose and McElmo Creek and Paradox Valley Projects are salinity control measures.
3. To date, the Planning Field Division is staffed by 2 economists, 21 engineers, 2 geologists, and 5 soil scientists. Support personnel includes draftsmen, surveyors, report writers, engineer technicians, and clericals. A Senior Staff Officer heads the division. The Projects Manager, located in Grand Junction, Colorado, is in charge of the Project Offices.
4. Wayne E. Cook, Senior Staff Officer, P.O. Box 640, Durango, Colorado 81301 Phone: (303) 247-0247
5. A. (1) The Dolores, Animas-La Plata, and San Miguel Projects are all multi-purpose development plans; including irrigation and municipal and industrial water development; fish, wildlife, and recreation enhancement; Indian resource development.  
 McElmo Creek and Paradox Valley are salinity control projects aimed at reducing the salt content of the Colorado River by attacking the problem at its source.  
 (2) All projects are in southwest Colorado. More specific locations are shown in the table below.

Project	County	River Drainage
Dolores	Dolores-Montezuma	Dolores-San Juan
Animas-La Plata	La Plata (extends into New Mexico)	Animas-La Plata
San Miguel	San Miguel-Montrose	San Miguel
Paradox Valley	Montrose	Dolores
McElmo Creek	Montezuma	McElmo Creek (San Juan)

- (3) Except for Paradox Valley and McElmo Creek, all feasibility plans were completed in 1966 and authorized for construction by Congress in 1968. Studies are currently under way to determine an updated project plan which will be finalized into Definite Plan Reports.

Paradox Valley was authorized by the Colorado River Salinity Control Bill signed by the President in June of this



5. A. (3) cont'd.  
year. McElmo Creek is still in the investigative-general development stage.  
(4) Bureau of Reclamation  
(5) Planning maps are available on all projects except the salinity control projects. Sketch maps are available for them.  
B. none immediately

6. a. no  
b. --  
c. --

7. a. --  
b. --  
c. --  
d. --

In accordance with the National Environmental Policy Act of 1969, the Bureau of Reclamation prepares environmental statements on all its projects. In keeping with the intent of the Act, environmental protection and enhancement is considered in all planning procedures.

8. Virtually all the plans affect the BLM. Generally the impact is withdrawal of land and its occupancy by project features. As the plans become more definite, specific impacts and mitigation can be determined.
9. Memorandums of Understanding exist between the Bureau of Reclamation and all other Federal agencies who also have the responsibility of developing and/or managing public resources. These agencies include the Fish and Wildlife Service, National Park Service, Bureau of Mines, Bureau of Land Management, Corps of Engineers, Bureau of Indian Affairs, Forest Service, and Soil Conservation Service.
10. None



## STATUS OF PLANNING CHECKLIST

1. Department of the Interior, National Park Service
2. Mesa Verde National Park, Colorado
3. Federal government with exclusive jurisdiction
4. Ronald R. Switzer, General Superintendent, Mesa Verde National Park
5. Master planning for Mesa Verde in progress
  - A. (1) Conceptual Master Plan
  - (2) The entire park (52,000 acres in relationship to adjacent lands)
  - (3) Planning began during summer of 1973 with the environmental assessment still in progress
  - (4) Planning team of the National Park Service, Denver Service Service Center and Mesa Verde Staff
  - (5) In process of being developed
  - B. (1) Conceptual Master Plan
6. Three units of Mesa Verde proposed for Wilderness classification submitted to Congress.
7. United States Code and Code of Federal Regulations. Additionally, federal and/or state codes effecting health, sanitation and environmental controls.
8. The environmental assessment will contain numerous alternatives covering such topics as interpretive possibilities, visitor flow patterns, access to the park, and alternate methods of transportation. One such alternative may involve purchasing of private lands or the trading of lands with BLM adjacent to Mesa Verde.
9. Memorandum of agreement with U.S. Forest Service - water supply source.  
Memorandum of agreement with BIA, Ute Mountain Ute Reservation-cooperative fire agreement.
10. Current agreements adequate

Upon completion of the environmental assessment, all federal agencies will have the opportunity to review the assessment and submit their comments. Additionally, public hearings will be held with regard to the assessment. This assessment should be completed in the near future.



## STATUS OF PLANNING CHECKLIST

1. Colorado State Forest Service
2. Forest management and protection assistance to private landowners; San Juan Basin.
3. State-service oriented
4. R.C. Berkholz, District Forester  
Colorado State Forest Service  
Box 1201  
Durango, Colorado  
303-247-5250
5. None
6. None
7. a. Regulations on fire hazards, (see copy of Mountain Land Planning, in Durango Area office).  
b. --  
c. --  
d. --
8. None
9. Unknown
10. None



## STATUS OF PLANNING CHECKLIST

## 1. Colorado State Department of Highways

4. W. L. Croonenberghs  
District Engineer  
P. O. Box 1551  
Highway Building  
Durango, Colorado 81302  
247-3771

The Action Plan (copy located in Durango Area Office) lays down process guidelines for future transportation planning and describes our involvement with all other federal, state, and local agencies in the planning process.

Regarding those specific highway projects which are in the planning stage and which involve B.L.M. lands, there are two within P. & M. Region 9. The first is Project RS 0184(2), Mancos-Dolores. We acquired R.O.W. from the B.L.M. for this project on May 24, 1973 and will not have any further effect on the property.

The second project is RF 019-2(14), Durango-South. One of the alternates for this project will involve B.L.M. land north and east of U.S. 160 in the Wilson Gulch area. Mr. Kendrick of your office was contacted concerning this project, and his comments were sent to us in a letter dated August 9, 1973. A Draft Environmental Impact Statement for this project will be circulated for comment in the very near future.



## STATUS OF PLANNING CHECKLIST

1. Colorado Division of Parks and Outdoor Recreation
2. State Park Agency, including statewide outdoor recreation planning.
3. --
4. Alan Everson  
1845 Sherman  
Denver, Colorado  
303-892-3437
5.
  - a.
    1. comprehensive outdoor recreation plan
    2. all outdoor recreation activities; statewide; all agencies and suppliers of opportunities
    3. On-going process; most recent approval 8-7-74
    4. AR Everson (above) and staff
    5. to be available after October 1, 1974.
  - b. --
6. Not Applicable
7.
  - a. --
  - b. --
  - c. --
  - d. Through review process, are have control over various outdoor recreation related proposals.
8. Bears heavily on all BLM programs in the area of outdoor recreation.
9. None
10. Need to work together in meeting the state's outdoor recreation needs as identified in our planning, and in ways compatible with BLM capabilities.



## STATUS OF PLANNING CHECKLIST

1. Colorado Division of Water Resources
2. Administration of Public Water. Division VII is an area whose west boundary is the Utah State line; south boundary, New Mexico state line; north boundary, top of Red Mountain Pass; and east boundary, top of Wolf Creek Pass. Consisting of the San Juan River Basin and tributaries.
3. Water Administration--State Government.
4. Wayne M. Crosby, P.E., Division Water Engineer  
P.O. Box 551 (located at 960 E. Second Avenue)  
Durango, Colorado 81301  
303-247-1845
5. Restricted to Water Supply with regard to prior appropriations.
  - a.
    1. Land development.
    2. Adequacy of water supply conversion from irrigation to other uses.
    3. Continuous plans are received.
    4. Individual developer.
    5. Kept for permanent file.
  - b.
    1. Land development
    2. Adequacy of water supply conversion from irrigation to other uses.
    3. Continuous plans are received.
    4. Individual developer.
    5. Kept for permanent file.
6.
  - a. No
  - b. Not applicable
  - c. " "
7.
  - a. Colorado Revised Statutes 1963 as amended.
  - b. Not applicable
  - c. " "
  - d. Advise proper agency of authority.
8. Require observance of State Statutes.
9. No difficulties to date.
10. No difficulties to date. Coordination depends on Communication to function properly.



## STATUS OF PLANNING CHECKLIST

1. Colorado Division of Wildlife
2. --
3. State Division under Department of Natural Resources
4. Richard F. McDonald, Area Supervisor, 247-5976
5. a. Strategic Plan (Copy to be found in Durango Area Office)  
b. Operational Plan
6. --
7. --
8. May modify recreatonal activities and livestock numbers.
9. We have one
10. We're OK



## STATUS OF PLANNING CHECKLIST

1. San Juan Basin Regional Planning Commission Region 9
2. Multi-county, multi-municipality. To develop and implement physical planning needs for the region. Counties of Archuleta, La Plata, San Juan, Montezuma and Dolores of Southwest Colorado.
3. Body politic and corporate under Colorado Revised Statute 106-2.
4. W.F. Gibbons, Director  
1901 Main Avenue  
Durango, Colorado  
303-247-5100
5. a. The Overall Program Design (OPD)  
This office is currently preparing inventories on the current regional status of the following elements of the forthcoming comprehensive plan:  
Land use, housing, water and sewer systems, open space, parks and recreation areas.  
b. Regional Goals and Objectives.  
Establishment of a Regional A-95 Clearinghouse.
6. No
7. a. Adopted in most of our counties.  
b. Sanitary land fills operated by each county.  
c. Road corridor studies by the Colorado Division of Highways.  
d. None
8. Minimal, if any effect.
9. Memos of Agreement between Region 9 and Southwest Colorado Comprehensive Health Council & the San Juan RC & D Council.
10. Agreements, programs, and development projects need to be more closely tied.



## STATUS OF PLANNING CHECKLIST

1. Montelores Planning Group (Montezuma and Dolores Counties).
2. Two County Comprehensive Planning.
3. Planning Commissions and Boards of County Commissioners for both counties.
4. David M. Denton, Planning Coordinator  
Room 303, Montezuma County Courthouse  
Cortez, Colorado 81321  
303-565-8317
5.
  - a.
    1. Land Use
    2. Housing
    3. Transportation
    4. Economic Base
    5. Public Facilities
6. No zoning at this time (A plan is pending).
7.
  - a. Subdivision Regulations - in force.
  - b. Dump grounds - Department of Health controlled.
  - c. No
  - d. None
8. Unknown
9. A good working relationship exists.
10. More coordination needed.



## STATUS OF PLANNING CHECKLIST

1. Upper San Juan Planning Commission (answers also apply to Archuleta County Commissioners)
2. Consists of a nine-member committee from Archuleta County and one from Mineral County.
3. Members appointed by County Commissioners
4. \*Sybil Micha, Technical Assistant  
P.O. Box 631  
Pagosa Springs, Colorado  
303-968-5851  
\*Until a Planner is hired
5.
  - a.
    1. Comprehensive, OEDP, Subdivisions Transportation and Land Use, Housing
    2. To complete for Archuleta County
    3. Above are completed since 1972, and others being worked
    4. Rob Hebbert and Sybil Micha
    5. Land Use Commission Map Folio, Highway and SCS maps
  - b. Land Use needs some planning  
Transportation not started  
Subdivision completed  
Mobile Home Regulations completed, waiting County Commissioners approval  
Zoning prepared and Planning Commissioners reviewing before submitting to County Commissioners.
6.
  - a. No for County, but City of Pagosa Springs already initiated plan
  - b. Ordinances dividing the Town into Districts.  
Archuleta County--departure from Standard zoning to more physical-cultural aspects.
  - c. Yes
7.
  - a. Yes, inforce
  - b. Yes, City controls
  - c. Yes
  - d. To a large degree
8. As growth is now, working satisfactorily
9. We are using all departments of State for review and comments on what we are doing.
10. Think more meetings with all interested parties within Region 9 such as planning, San Juan Basin Health, Department of Highways, BLM, etc. to have a better understanding of problems facing each County and exchanging ideas that would benefit all, not just a few.



## STATUS OF PLANNING CHECKLIST

1. Southern Ute Tribe
2. Indian Tribe with parts of 306,000-acre reservation located in Archuleta, La Plata and Montezuma Counties.
3. Sovereign entity, self-governing.
4. Leonard C. Burch, Chairman, Southern Ute Tribe  
Tribal Affairs Building  
Ignacio, Colorado 81137  
303-563-4525
5.
  - a.
    1. Comprehensive covering all resources including human, water, mineral, land-use etc.
    2. Plan covers entire reservation
    3. Prepared 1972-73
    4. Southern Ute Planning Commission with assistance of BIA and Tribal Economic Development Department.
    5. Planning Maps in process of being developed
  - b.
    1.
      - a. Ground Water Study - BIA - USGS
      - b. Wildlife Habitat Study - U.S. Fish & Wildlife Service
      - c. Chimney Rock Area Planning - USFS
      - d. Coal Resources Study - USGS (Completed)
      - e. Archaeological Study - University of Colorado (Completed)
      - f. Soils Study - BIA - (Completed)
    2. Reservation-wide
    3. No's a, b, and c. - On-going
    4. Various federal agencies as indicated
    5. In-process.
6.
  - a. Zoning will be responsibility of Tribal Planning Commission which will make recommendations to the Tribal Council.
  - b. Not Applicable
  - c. Will follow planning
7.
  - a. No
  - b. Yes - State and Federal Regulations are complied with as much as possible.
  - c. Yes
  - d. No
8. No effect is anticipated
9. No current agreements exist.
10. The Southern Ute Tribe has historically cooperated to the fullest extent possible with all federal, state, county, and local governmental agencies.



## STATUS OF PLANNING CHECKLIST

1. Southwest Colorado Comprehensive Health Planning Council, Inc.
2. Areawide comprehensive health planning agency; purpose is to develop areawide comprehensive health plan for the five counties in Colorado Planning Region 9.
3. Non-profit private corporation
4. Ray Rabe, Executive Director, Box 618, Durango, 247-3851
5. a. We have no plan in effect  
b. Have just completed
  - 1) Regional emergency medical services plan
  - 2) See attached format (next page)
  - 3) To be adopted July 31, 1974
  - 4) CHP staff and ad hoc committee
  - 5) Not applicable
6. --
7. --
8. not known
9. We have a memorandum of understanding with the San Juan Basin Regional Planning Commission
10. We feel that membership and/or staff of all other public agencies should be familiar with the purpose and specific functions of all other agencies. This does not presently exist, but we are willing to work toward achieving such an environment or mutual understanding.



## EMERGENCY MEDICAL SERVICES OUTLINE

## I. Organization for EMS Implementation

- A. Authority
- B. Staff Structure
- C. Functional Identification and Description
- D. EMS Planning Area Identification
- E. Advisory Groups
- F. Legislation

## II. Planning Information

- A. EMS Resources - Current Status
  - 1. Ambulance Services
  - 2. Ambulances and Equipment
  - 3. Ambulance Personnel
  - 4. Facilities
  - 5. Communications
  - 6. Consumer Education
  - 7. Evaluation
  - 8. Patient Flow Pattern
- B. Description of the Program Area
  - 1. Demographic
    - a. Population
    - b. Population Densities
    - c. Medical Personnel
  - 2. Area Characteristics
    - a. Roads
    - b. High Accident Locations
    - c. Geographic Conditions
    - d. Climatological Conditions
    - e. Economic and Social Conditions
    - f. Epidemiological Characteristics
    - g. Other Factors

## III. EMS Standards

- A. Organizational
- B. Operational
- C. Personnel Training
- D. Ambulance and Equipment Specifications
- E. Response Time
- F. Communications
- G. Hospital Facilities

## IV. Deficiencies and Needs

- A. Manpower
- B. Training
- C. Communications
- D. Transportation
- E. Facilities
- F. Critical Care Units



## Deficiencies and Needs continued

- G. Public Safety Agencies
- H. Consumer Participation
- I. Accessibility to Care
- J. Transfer of Patients
- K. Standard Medical Record Keeping
- L. Consumer Information and Education
- M. Evaluation
- N. Disaster
- O. Mutual Aid

## V. Goals and Objectives

## A. General Objectives

Each of components listed under Deficiencies and Needs is again covered here.

## B. Specific Objectives

Listed by component and completion date.

## VI. Program Implementation

## A. Plan of Action

## B. Resources Needed

## VII. Evaluation



## STATUS OF PLANNING CHECKLIST

1. Empire Electric Association, Inc.
2. Electric Utility
3. Board of Directors
4. Everett C. Johnson, Manager  
P.O. Drawer K  
Cortez, Colorado 81321  
303-565-8534
5.
  - a.
    1. Long Range Plan of Electric and Transmission Facilities
    2. Montezuma, Dolores, San Miguel Counties, Colorado; portion of San Juan County, Utah.
    3. Updated about every two years.
    4. Merrick and Company, Consulting Engineers, Denver
    5. System maps updated periodically.
  - b. --
6.
  - a. --
  - b. Zoning in San Juan County, Utah, and portion of San Miguel County, Colorado
  - c. ?
7.
  - a. Yes. All counties.
  - b. --
  - c. Not to my knowledge
  - d. State and Federal
8. Impact study prepared when construction is anticipated while plans are first being studied.
9. Numerous BLM Rights of Way in the area.
10. Some recent rights of way in Utah required discussion and minor modification on certain requirements to be workable. These requirements will be analyzed prior to applications for BLM right of way in the future to smooth out the problem areas.

We were very impressed with cooperation of BLM personnel. Much more so than they were required to be. Really Great to work with.



## /5.0/ DISTRICT ORGANIZATION AND HISTORY

The BLM Durango Area Office services the San Juan Resource Area, which is a subdivision within the management area of the Montrose District Office. Jerry Kendrick has been Durango's Area Manager since 1967. The San Juan Resource Area contains Archuleta, La Plata, Montezuma, and Dolores Counties. San Juan County is serviced both by the Durango Area Office and the Montrose District Office, depending upon the nature of the task.

Beginning on the following page is a brief overview of major management thrusts of the Montrose District. This information was developed by Bill Reynolds (Montrose District Office) in 1970. Table 84 lists orders establishing and modifying District boundaries through 1966. Table 85 identifies the succession of District managers, while Table 86 indicated trends in District staff size and composition through 1968. Further investigation could update this overview with pertinent information about the year since 1970 and with specific orientation towards the San Juan Resource Area.



"Management Thrusts: Department of Interior Orders No. 98982-F and 98982-G established Grazing Districts #3 and #4 at Ouray and Dolores, Colorado, respectively, in April 8, 1935. Concurrently, grazing units and precincts were organized, reductions in cattle and sheep use were made, and the Civilian Conservation Corps began working on range-oriented projects. Assigned to Grazing District #3 was H.J. Burback whose responsibilities included supervision of the CCC's, grazing administration, deputy game and fish warden, and land-oriented applications such as those for homesteads, rights-of-way, and special land use permits.

A mining engineer named Warren R. Sholes was assigned to the other district, and he and Burback, having similar responsibilities, worked the entire southwestern part of Colorado. In fact, records indicate that during the late 1930's both men and their staff of 12-15 probably worked from an office in Montrose.

By the time World War II started, several grazing trespass cases were resolved, preliminary adjudication had begun, and most of the users had been issued term permits resulting from some range surveys. Even though a lands section was established at the Regional Office to handle an increasing and burdensome case load, District Graziers still investigated and wrote reports on lands case applications.

Also, about 1940, one employee was allotted to the District to carry out the new Soil and Moisture Conservation work.

Beginning in 1942 when the CCC camps were closed, this employee was responsible for preliminary planning for a six-year improvement program for the Gunnison and Uncompahgre Valleys. Cooperative reseeding, some of which had been transferred to the Grazing Service from Soil Conservation Service, and reservoir construction, spring developments, waterspreading, sagebrush railing and contouring were activities carried out in the S & MC areas.

The timber program was handled by the District Grazier and 12 timber applications were processed in 1940. After four timber trespass cases were settled that year, it wasn't too surprising that 63 applications were received the following year.

The staff size remained about the same even though a historic event took place in 1946 when the Grazing Service and the General Land Office were combined and the Bureau of Land Management was born. The "old" General Land Office personnel remained at the regional level where a land and minerals section came into being and the Grazing Service field staff remained essentially unchanged.



During 1947-48, funds were not appropriated at the insistence of a Senator from Nevada named McCarran. Some people were "laid off" and recovery was slow. Some restaffing was done during the years 1948-1950, and by the early 50's a staff forester was assigned along with four S&M employees. The staff size thus climbed back to around 7 or 8 employees in the new office at Durango and in Montrose for a total of 14-16 employees in the two districts.

During the years between 1951 and 1955, S&M was expanded and a six-year program was adopted in a pilot area near Gunnison. Two more conservationists and an engineer were hired, and the pilot program came closest of all previous six-year programs to being accomplished. Later in 1955, community watershed planning replaced six-year programs and the District was covered by nine such watersheds.

Some attention had been given to wildlife during all these years, but usually the discussion centered around the problems deer were causing around the Uncompahgre Plateau. In fact, the deer were blamed for seriously overgrazed rangeland and for causing a deteriorated watershed condition. It was common practice for the District to make herd-size recommendations and for Game and Fish to respond favorably. Though there has been an awareness of the critical nature of big game habitat since 1957, the District never hired a wildlife specialist until 1968. There were, however, hunter access roads built in 1945 and 1952, primarily to draw more hunters into the area in an effort to reduce herd sizes.

The late fifties and early sixties saw staff sizes increasing in both offices. Most of the emphasis still centered around the livestock industry as there were 10 employees in the Montrose Office in S&M and Grazing Administration. By this time each district had three foresters, a lands man and an Administrative Officer. Durango, by 1962, had 16 employees - three less than Montrose.

Since 1946, the lands branch of the BLM organization had been located at the Regional Office and actually did not function as an integral part of field operations.

Probably one of the more important aspects of the lands man's job was to begin inventorying the Indian ruins in the western part of the Durango District. A contract was made finally in 1964 with Colorado State University to formally restore a pueblo known today as the Lowry Ruin National Historic Landmark. Another contract with C.U. for inventory of archeological sites in the McElmo-Mancos area has been in effect for several years. at this time, about 2/3 of the territory has been examined. Because there were so many ruins, it became imperative that a land territory project area be thoroughly



searched beforehand in an attempt to preserve the archeological values.

Foresters, in addition to their timber management responsibility, were in charge of the fire control program (protection) and in these two districts even "wore the recreation and wild life specialist hat" in trying to assess these resource capacities. Very superficial recreation inventories had been made by this time, and some progress was evident. Sites were inventoried and marked for recreation facility development and hunting and fishing areas identified where ownership patterns or a lack of roads were the constraints to public access. This eventually led to recreation and public purposes withdrawals and most recently to segregations from mineral entry under the Classification and Multiple Use Act.

Though the Classification and Multiple Use Act was passed in 1964, a definite change had already begun to take place. Back in the late 1930's, the need for a comprehensive wildlife management plan was recognized but nothing was done. There were early attempts to develop range management plans for the users but only six-year S&M plans evolved. Another planning effort in 1960 was an attempt to set up a "Montrose Project" patterned along the lines of the Vale Project. Along came "Master Unit" plans, designed to be a comprehensive plan but they were doomed partly because only the lands discipline became involved. Resource Conservation Areas were set up for demonstration purposes as a need for better public relations and information became more evident.

The staffing level has remained about the same since 1964. A reorganization, following the Act of 1964, in addition to combining the Durango and Montrose Districts, has diminished the specialist orientation of foresters and range managers to provide better coordinated and more efficient management of the several resources.

The Montrose District, as well as others throughout the BLM, was subdivided into Resource Areas. Natural Resource Managers were placed in charge of the Resource Areas (Area Managers), and are responsible for over-all resource planning and management within their area. It has been pointed out that, for the first time, BLM has a career development program for the Natural Resource Manager and the technical specialist. The District staff holds two opportunities for the employee who wishes to specialize-Division of Operations and Division of Resource Management. The supervisory, natural resource management positions enable the employee to gain knowledge and experience in all phases of land-resource management."



Orders Establishing and Modifying District Boundaries

Date	Order No.	Dist. Affected	Explanation
4/8/35	Dept. Order #98982-F	G.D. Colo #3	Established
4/8/35	Dept. Order #98982-G	G.D. Colo #4	Established
1/8/37	FR Doc. 37-118	G.D. Colo #3	Minor deletions
5/26/37	Dept. Order # 137835	G.D. Colo #3	Added large block of land in San Luis Valley
5/24/37	Dept. Order #159796X	G.D. Colo #3	Minor deletions
3/13/39	FR Doc. 39-907	G.D. Colo #3	Deleted approx 8 twps Ridegway vicinity
3/17/39	FR Doc. 39-985	G.D. Colo #3 & G. D. Colo # 4	Transferred approx 3 twps lying N.E. from Placerville from G.D. Colo #3 to G.D. Colo #4
3/28/39	FR Doc. 39-1310	G.D. Colo #3	Deleted 40 acres for USFS admin site
10/4/39	FR Doc. 39-4093	G.D. Colo #3	Revocation to estab. Black Canyon of the Gunnison National Monument
??/31/40	FR Doc. 40-3341	G.D. Colo #3 \$ G.D. Colo #4	Trans. approx 3 twps Silverton vicinity from G.D. Colo #4 to G.D. Colo #3
9/ 3/40	FR Doc. 40-4199	G.D. Colo #3	Added large block of land in San Luis Valley
10/12/40	FR Doc. 40-4425	G.D. Colo #7	Deleted large block of land north of Uncompahgre, Grand Mesa and White River Nat. Forests to estab G.D. Colo #7
10/14/40	FR Doc. 40-4474	G.D. Colo #3	Deleted 40 acres rec. withdrawal for Un- Compahgre Project.
5/31/41	FR Doc. 41-4460	G.D. Colo #3	Rec. withdrawal for San Luis Valley Project
10/15/41	FR Doc. 41-8850	G.D. Colo #3	Delete 120 acres rec. withdrawal for Paonia Project
11/25/41	FR Vol 6 No. 237 12/6/41	G.D. Colo #3 & G.D. Colo #8	Delete large block of land in San Luis Val- ley and establish #8
11/10/41	FR Doc. 41-8848	G.D. Colo #4	Rec. Withdrawal for Mancos Project
5/16/42	FR Doc. 42-4894	G.D. Colo #4	Rec. Withdrawal for Florida Project
12/15/42	FR Doc. 42-14021	G.D. Colo #3	Deletion for USFS admin site.



<u>Date</u>	<u>Order No.</u>	<u>Dist. Affected</u>	<u>Explanation</u>
1/4/43	FR Doc. 43-1102	G.D. Colo #4	Rec. Withdrawal for Dolores Project.
11/2/43	FR Doc. 43-19055	G.D. Colo #4	Rec. Withdrawal for Mancos Project
7/7/48	FR Doc. 48-6184	G.D. Colo #4	AEC Withdrawal
11/6/51	FR Misc..61612	G.D. Colo #3	Rec. Withdrawal revocation Gunnison-Arkansas Project
2/12/52	FR Doc. 52-1914	G.D. Colo #4	Rec. Withdrawal revocation
9/8/54	FR Doc. 54-7160	G.D. Colo #4	AEC Withdrawal
12/24/58	FR Doc. 58-10578	G.D. Colo #3	Rec. Withdrawal for 7333.85 acres for Curecanti Project
12/20/61	FR Doc. 61-12333	G.D. Colo #3	Rec. Withdrawal of additional 600 acres for Curecanti Project
4/6/62	FR Doc. 62-3536	G.D. Colo #3	Rec. revocation of 574.96 acres from Curecanti Project
2/8/66	FR Doc. 66-1492		Combined BLM Districts 3 & 4
10/13/66	FR Doc. 66-11405	G.D. Colo #4 & G.D. Colo #7	Delete block of lands west of Uncompahgre National Forest north of Mesa Creek from G.D. #4 add to G.D. #7

SOURCE: Bill Reynolds, Montrose District Office, November 1970.



TABLE 85:

## PERIODS OF TENURE OF DISTRICT MANAGERS

H. J. Burback	Ouray #3	
Russel B. Rose	Ouray #3 and Dolores #4	1936-1941
Warren R. Sholes	Dolores #4	1936??
Frank Morgan	Dolores #4	1940
Frank Morgan	Ouray #3	1941-1942
J. D. Dillard	Dolores #4	1941-1942
Henry E. Snyder	Dolores #4	1942-1950
(Wm. F. Colt, Acting. 1943-1944)		
Evert L. Brown	Ouray #3	1943-1953
Raymond E. McBride	Durango #4	1950-1954
William E. Campbell	Montrose #3	1953-1958
William J. Malencik	Durango #4	1954-1957
H. Curt Hammit	Durango #4	1957-1961
John W. Riley	Montrose #3	1958-1966
Richard M. Kerr	Durango #4	1961-1964
Arthur W. Zimmerman	Montrose #3 & Durango #4	1966-1970
Robert E. Anderson	Montrose #3 & Durango #4	1970-1973
Marlyn Jones	Montrose #3 & Durango #4	1973-

SOURCE: Bill Reynolds, Montrose District Office, November, 1970



TABLE 86 : TREND IN DISTRICT STAFF SIZE AND COMPOSITION\*

	Range	R.I., S&M	For- estry	Lands	Spvsry & Admin	Cler ical	Wild life	Res. Area Staffs	Total
*1935 Dolores #4	2	2(1)							4
*1935 Ouray #3	1	2(1)							3
*1938 Dolores (combined)									
1938 Ouray	2	4(1)			1				7
*1940 Dolores (combined)									
1940 Ouray	2	4(1)			1				7
*1945 Ouray#3	1	1			1	1			4
*1945 Dolores #4	1	1			1	1			4
*1947 Ouray #3		$\frac{1}{4}$ (2)			1				$1\frac{1}{4}$
*1947 Dolores #4		$\frac{1}{4}$ (2)			1				$1\frac{1}{4}$
*1950 Montrose #3	1	$\frac{1}{2}$ (2)			1	1			$3\frac{1}{2}$
*1950 Durango #4	1	$\frac{1}{2}$ (2)			1	1			$3\frac{1}{2}$
1953 Montrose	2	1			1	1			6
1953 Durango	1	1	1		1	1			5
1955 Montrose	2	2	1		1	2			8
1955 Durango	1	2	1		1	1			6
1957 Montrose	2	3	1		1	2			9
1957 Durango	1	3	1		1	2			8
1959 Montrose	3	4	1		1	2			12
1959 Durango	3	3	2		2	2			11
1961 Montrose	4	5	1		2	2			16
1961 Durango	3	3	3		2	2			13
1963 Montrose	5	5	3	1	2	3			19
1963 Durango	4	5	3		2	2			16
1965 Montrose	4	5	3	1	2	3			18
1965 Durango	2	2	3	1	1	3			12
1967 Montrose (combined)	3	5	1	1	4	4	1	12	31
1968 Montrose (combined)	1	5	1	2	3	5		15	32

\*All entires prior to 1953 are subject to correction; they are based upon incomplete records and hearsay.

(1) Force Account

(2) One man serving two or more districts

(3) Includes some "Range Conservationist" titles believed to have been assigned range management responsibilities.

SOURCE: Bill Reynolds, Montrose District Office, November, 1970.



## APPENDIX A :

## GENERAL GOVERNMENT ACTIVITIES

Expenditures:

	ARCHULETA DOLORES LA PLATA MONTEZUMA SAN JUAN				
General Government	\$ 67,400	\$ 78,300	\$280,000	\$217,300	\$ 61,300
Commissioners	10,000	9,400	48,800	34,400	7,700
Administration	11,100	14,600	9,000	9,400	13,300
Clerk and Recorder	11,100	12,200	72,600	37,800	8,900
Election	3,100	2,300	NA	13,100	1,600
Treasurer	7,500	10,800	35,400	25,600	8,800
Assessor	10,100	10,500	70,700	53,200	6,000
Planning & Zoning	10,800	7,200	10,200	20,300	NA
Data Processing	NA	NA	NA	NA	NA
Plant Maintenance	3,700	9,400	33,300	23,500	15,000
Other	NA	1,900	NA	NA	NA
Judicial	\$ 6,600	\$ 3,900	\$ 45,200	\$ 24,900	\$ 2,200
Public Safety	\$ 11,400	\$ 12,600	\$106,200	\$ 71,600	\$ 11,700
Law Enforcement	9,600	11,900	96,100	66,800	10,100
Fire	1,400	NA	8,100	NA	10
Other	400	700	2,000	4,800	
Public Works	\$248,900	\$302,000	\$683,700	\$540,400	\$ 57,100
Roads & Highways	248,900	302,000	662,500	540,000	57,100
Solid Waste Services	NA	NA	21,200	NA	NA
Other	NA	NA	NA	NA	NA
Health	\$ 7,500	\$ 6,200	\$ 46,800	\$ 78,300	\$ 4,400
Public Welfare	\$105,000	\$ 53,400	\$895,900	\$577,600	\$ 20,500
Administration	32,700	15,300	174,800	134,700	5,200
ADC*	52,600	30,400	460,300	333,300	11,200
Other	19,700	7,700	260,800	109,600	4,100
Culture - Recreation	\$ 6,900	\$ 8,000	\$ 75,800	\$ 19,200	NA
Recreations	NA	NA	NA	NA	
Parks	NA	NA	NA	NA	
Library	1,200	1,800	10,000	NA	
Fair	800	100	32,600	5,400	
Extension Services	4,900	6,100	18,000	13,700	
Other	NA	NA	15,200	100	
Miscellaneous	\$ 1,900	\$ 1,300	\$ 4,900	\$ 10,200	\$ 900
Total Current Expenditures	\$455,600	\$465,700	\$2,138,500	\$1,539,500	\$158,100
Transfers to Enterprise Activities and Governments	NA	NA	\$ 53,900	NA	\$ 13,000
Capital Outlay	\$ 3,500	\$ 63,300	\$248,500	\$142,900	\$ 5,400
Debt Service	NA	NA	NA	NA	NA

\*ADC: Aid to Dependent Children



## GENERAL GOVERNMENT ACTIVITIES (cont.)

Public Enterprise Activities:

	ARCHULETA	LA PLATA	SAN JUAN
	(Airport)	(Airport)(Intragovern- mental service fund)	(Hospital)
Operating Income	NA \$ 23,300	\$254,700	NA
Charges		18,900	
Fees		NA	
Other		4,400	
Transfers In	NA \$ 22,900	NA	\$ 13,000
Other	NA	\$ 11,800	NA
Total Revenue	NA 46,200	266,500	13,000
Operating Outlay	\$ 27,800 \$ 22,100	\$234,700	\$ 10,200
Other	NA	NA	NA
Current Outlay	\$ 27,800 22,100	234,700	\$ 10,200
Capital Outlay	NA \$ 700	NA	NA
Debt Service	NA \$ 15,000	NA	NA
Principle		15,000	

\*\*Dolores and Montezuma counties have no Public Enterprise Activities.

Pension Fund:

	DOLORES	MONTEZUMA
County Share	\$ 21,900	\$43,900
Employee Share	NA	NA
Other	NA	NA
Total Income	\$ 21,900	\$ 43,900
Pension Payments	NA	NA
Other	\$ 21,900	\$ 43,900
Current Outlay	\$ 21,900	\$ 43,900

\*\*Archuleta, La Plata, and San Juan counties have no pension fund.



## GENERAL GOVERNMENT ACTIVITIES (cont.)

Revenues:

	ARCHULETA	DOLORES	LA PLATA	MONTEZUMA	SAN JUAN
Taxes	\$154,500	\$146,100	\$860,900	\$577,000	\$103,400
General Property	96,300	130,500	739,500	498,800	95,200
Specific Ownership	25,200	13,900	113,400	74,600	7,600
Sales	29,500	NA	NA	NA	NA
Other	3,500	1,700	8,000	3,600	600
Licenses and Permits	\$ 500	300	\$ 1,300	\$ 2,700	\$ 100
Charges for current services	\$ 18,100	\$ 10,400	\$ 89,500	\$ 69,300	\$ 9,000
Fines and Forfeits	NA	NA	NA	\$ 16,200	NA
Miscellaneous	\$ 9,300	\$ 11,400	\$ 78,900	\$ 26,300	\$ 7,600
Transfers from enterprise activities	NA	NA	NA	NA	NA
Total Revenue	\$623,500	\$595,700	\$2,566,200	\$1,823,700	\$242,900

SOURCE: 1972 Local Government Financial Compendium, State of Colorado Division of Local Government, Department of Local Affairs.

The abbreviation "NA" denotes either non-applicable or not available.

A glossary of terms used in this table begins on the following page.



## GLOSSARY OF TERMS

REVENUEGeneral Government Activities

General Property Tax-The revenue derived from a local ad valorem levy on real property and certain categories of personal property as defined by law.

Specific Ownership Tax-The revenue derived from the state formulated value levy on certain vehicles, mobile equipment and mobile homes.

General Sales and Use Tax-The revenue derived from a levy on retail sales and use of commodities purchased outside the taxing jurisdiction.

Employment Occupation Tax-Revenue derived from a local levy on employers and/or employees.

Franchise Tax-The revenue derived from a levy imposed for the privilege of doing business, or using public right-of-way.

Licenses and Permits-Includes the sale of business licenses and permits which are payments allowing a business firm to function, and non-business licenses and permits which are payments made to perform a specific activity.

Intergovernmental Revenue-Includes revenues received from other governments in the form of grants, shared revenues, payments in lieu of taxes and receipt of charges. It does not include old age pensions.

Charges for Current Services-Charges and fees designed to defer the cost of current services that is of particular benefit to the recipient, i.e., some part of the benefit is exclusively conferred to the purchaser. This category does not include utility enterprise charges which are presented separately, nor does it include intergovernmental or intragovernmental payments except in the case of county treasurer fees paid by local governments for services.

Fines and Forfeits-Includes fines and penalties imposed for the commission of statutory offenses, violation of lawful administrative rules and regulations, neglect of official duties, and forfeits of deposits held as performance guarantees.

Miscellaneous Revenue-Includes earnings on deposits and investments, rents and royalties, special assessments, sales of compensation for loss of assets, refunds of expenditures, contributions and donations, and other miscellaneous revenues.

Transfers from Enterprise Activities-Inter-fund transfers between self-standing local government operations, i.e., between enterprise activities and the general government activities. The transfer figures are net results of assigned property tax levies and counter transfers but exclusive of enterprise activities' payments in lieu of taxes.



## Public Enterprise Activities

Operating Income-The revenue generated by charges and fees for benefits delivered. Charges are the recurring income resulting from a service to the user. Fees are "one time" income authorizing a specific activity to be performed for a potential user, e. g., tap fees.

Transfers In-Include any subsidies received from the general government activities, revenue sources, and direct grants from other governments.

## EXPENDITURES

### General Government Activities

Commissioners-The direct expenditures of the board of county commissioners and their office.

Legislative-The expenditures by the municipal governing body in the performance of its activities.

Judicial-The expenditures for judicial activities of the county, city or town in the operations of the county court, municipal courts, and police magistrate courts. In the county presentation, judicial is separated from the general government category because of trend distortions resulting from an ever-increasing state funding of the judicial activities.

Executive-The expenditures of city and town general executive officers, employees of their offices, and executive boards.

Clerk and Recorder-The expenditures of the county clerk's office in performing the duties as clerk to the board of commissioners, recorder of legal instruments, motor vehicles titling, registration, driver licensing, and related miscellaneous duties.

Treasurer-The expenditures of the county treasurer's office in performing the treasurer's duties serving state, county and local governments within the county in the receipting, care and disbursement of certain revenues.

Assessor-The expenditures of the county assessor's office in performing the assessor's duties of evaluating real and personal property within the county that are subject to ad valorem taxes (public utilities and motor vehicles do not come under the assessors jurisdiction).

Elections-The expenditures related to voter registration and conducting elections.

Administration-The expenditures for central staff functions including financial administration, law, personnel, etc.

Planning and Zoning-The expenditures for planning, zoning, and board of adjustments.

Data Processing-The computer related central operating expenditures.



Plant Maintenance and Ops-The expenditures necessary for the upkeep and maintenance of governmental structures and associated grounds.

Public Safety-The expenditures principally related to protecting persons and property from socially undesired acts by persons or their products. The activities performed include municipal police protection (including municipal jail expenditures), county law enforcement (including sheriff and county jail expenditures), fire protection and other activities such as building inspections and civil defense.

Public Works-The expenditures related to the performance of crews in providing and maintaining roads, Highways and streets, solid waste handling and weed control. Public works function does not include sewerage, an enterprise activity, but does include storm sewers. Capital forming work done by the crews are included but when done by outside contractors the expenditure is presented in the capital outlay category.

Health-The expenditures related to protecting persons from non-human related forces, excluding hospitalization and welfare supported health protection. The health function includes expenditures for public health administration, vital statistics, regulation and inspection of food and drugs, communicable disease control (including animal and pest control), maternal and child health services, health centers and general clinics, laboratory tests essential to the maintenance of public health, mental health, ambulance services, and cemeteries.

Culture-Recreation -The expenditures related to leisure time activities. The activities included are participant recreation (golf, swimming, etc.) spectator recreation (museums, band concerts, etc.) parks, county fairs, extension service and libraries. Zoos, an arena, auditorium and stadium are presented separately as enterprise funds.

Public Welfare-The expenditures for activities designed to provide public assistance and institutional care for individuals who are economically unable to provide essential needs for themselves. It includes general assistance, welfare, tuberculosis assistance, day care and work incentive programs. It does not include old age pension payments which are state monies passed through the county governments.

Debt Service-The expenditures incurred for the payment of debt, including principal and interest. Interest includes agent's fees and related charges.

Miscellaneous-The expenditures that can not be assigned elsewhere for whatever reason.

Capital Outlay-The expenditures for the acquisition of capital goods including land, buildings and equipment, and any improvements thereto that are performed by outside entities.



Public Enterprise Activities

Operating Outlay-The current expenditures to deliver the benefits that generate operating income.

Debt Service-See above under General Government Activities.

Capital Outlay-See above under General Government Activities.

NOTE: Depreciation is not considered an expenditure.

SOURCE: Local Government Financial Compendium, 1972, State of Colorado, Division of Local Government .



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\* particularly useful



This intern report was read and accepted by a staff member at:

Agency: Bureau of Land Management

Address: 700 Colorado State Bank Building  
1600 Broadway  
Denver, Colorado 80202

This report was completed by a WICHE intern. This intern's project was part of the Resources Development Internship Program administered by the Western Interstate Commission for Higher Education (WICHE).

The purpose of the internship program is to bring organizations involved in community and economic development, environmental problems and the humanities together with institutions of higher education and their students in the West for the benefit of all.

For these organizations, the intern program provides the problem-solving talents of student manpower while making the resources of universities and colleges more available. For institutions of higher education, the program provides relevant field education for their students while building their capacity for problem-solving.

WICHE is an organization in the West uniquely suited for sponsoring such a program. It is an interstate agency formed by the thirteen western states for the specific purpose of relating the resources of higher education to the needs of western citizens. WICHE has been concerned with a broad range of community needs in the West for some time, insofar as they bear directly on the well-being of western peoples and the future of higher education in the West. WICHE feels that the internship program is one method for meeting its obligations within the thirteen western states. In its efforts to achieve these objectives, WICHE appreciates having received the generous support and assistance of the Economic Development Administration; the Jessie Smith Noyes Foundation; the National Endowment for the Humanities; the National Science Foundation; the Division of Education of HEW; and of innumerable local leaders and community organizations, including the agency that sponsored this intern project.

For further information, write Bob Hullinghorst, Director, Resources Development Internship Program, WICHE, Drawer 'P', Boulder, Colorado 80302, (303) 443-6144.

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